

Supply Chain School Horizon Group Meeting

Date: Thursday 2nd June 2016; 10 am to 4pm

Venue: University of Nottingham

Attendees: Jacqui Glass (*Loughborough University – Chair*), Mohammad Rickaby and Shaun McCarthy (*Action Sustainability*), Josien Van Der Meer (*Balfour Beatty*), Erica Russell (*Carillion*), Gareth Rondel (*Kier*), Susan Hone-Brookes (*Laing O'Rourke*), Maeve O'Loughlin (*Middlesex University*), James Upstill-Goddard (*Responsible Solutions*), Adam Robinson (*Sir Robert McAlpine*), Colin Moorcroft (*Skanska*), Andy Swain (*Tarmac*), Baris Yalabik (*partly by phone*) (*University of Bath*), Paul Wyton (*Sheffield Hallam University*), Laura Spence and Diego Vazquez-Brust (*Royal Holloway*), Alexander Trautrimms (*University of Nottingham*)

Apologies: Donna Hunt (*Aggregate Industries*), Shamir Ghumra (*BRE*), Noreen Winhall (*Carillion*), Keith Chanter (*EMCOR UK*), Camila Bernal (*Laing O'Rourke*), Tony Parry (*University of Nottingham*), Mark Gaterell (*University of Portsmouth*),

Minutes of the Meeting/ Workshop

1. Introductions

- Jacqui welcomed everyone to the meeting.

2. Actions from previous meeting

- All actions were covered off.
 - Target date for the completion of the advanced business ethics module is September 2016.
 - Shaun provided a quick update on the IEMA initiative:

The vision work concluded that the School should offer accredited learning for CPD purposes but not full courses for qualifications. We are in the process of a major IT upgrade: this will enable individuals to have personal action plans and learning logs, in addition to company ones, that they can send to professional institutions, or ideally the School simply exchanges data with the institution. We can also work with professional bodies to provide bespoke action plans, provided the content is free at point of use. This means we can provide accredited CPD learning with any relevant body; we are targeting IEMA, CIPS, RIBA, ICE, CIOB, RICS and potentially others going forward.

- No nominations have been received to date for taking on the Chair position of the Horizon Group from January 2017. (See further note under AOB).

3. Workshop – Part 1 (Presentations and Discussions)

Jacqui provided a brief introduction. She noted that in light of the £20K per annum budget awarded to the group, in the March meeting the group decided to have a workshop to determine priority areas that the group should collectively focus on. Subsequently, prior to this meeting, Academic Partners were invited to pitch for ideas, that were: a) in line with their research interests and b) would contribute to the School. If approved by the School Board, successful proposals will be granted funding (max. £5K per annum), to carry out the research. It was also noted that the funding is not limited to one year, so proposals likely to last longer than a year were also eligible.

- The first part of the workshop consisted of 2 sets of presentations (6 in total), each followed by a panel discussion and Q&A session. The group had the opportunity to clarify matters and discuss different aspects of the proposals in detail.

The following is an outline of the presentations on the day. All the presentation slides and the subsequent revised proposals are enclosed with these minutes.

- Academic pitch #1 - Dr Alexander Trautrim, University of Nottingham
 - Title: An SME response selection framework for new sustainability risks in the supply chain
- Academic pitch #2 - Maeve O'Loughlin, Middlesex University
 - Title: Exploring efficacy of sustainable supply chain strategies in assuring good conditions for supply chain workers - Proposal for Pilot Survey
- Academic pitch #3 – Dr Baris Yalabik, University of Bath
 - Title: SCSS Sustainability strategy framework

There was a panel discussion at this point where the proposals were discussed in great detail. The members also had the opportunity to ask questions. Following a short break, the remaining three presentations were delivered, which were as follows:

- Academic pitch #4 - Prof Laura Spence, Royal Holloway University of London
 - Title: Evaluating the impact of the School's revised Ethics E-Learning Modules
- Academic pitch #5 – Dr Paul Wyton, Sheffield Hallam University
 - Title: Impact of client attitude and acceptance of sustainability on the delivery of more sustainable built environment
- Academic pitch #6 – Dr Diego Vazquez-Brust, Royal Holloway University of London
 - Title: New Horizons for Construction Industry Research Agenda: Understanding Externalities

There was also a panel discussion at this point where the proposals were discussed in some detail. The members had the opportunity to ask questions.

- The key notes / discussion points were as follows:

- Overall, the presentations were well received by the group members, illustrating the valuable opportunities to collaborate with the industry and academics partners in delivering industry informed research, undertaken by academics.
- Shaun noted that due to the limited budget, we are unlikely to be able to support all proposals. He noted that the successful proposals are subject to the approval of the Board. The current £20K budget is subject to increase in the following years. The group has to demonstrate its ability in delivery research, with outcomes that can contribute to the School resources.
- Shaun noted that the presentations in general did not give a clear breakdown of the budget required and the costs likely to be incurred to undertake the project. This will be essential information for the Board.
- Shaun emphasized the importance of focusing on expected outcomes and how these will contribute to the School, as these projects are funded by the School.
- Alexander Trautrim's proposal proposed the development of a framework for SMEs in the construction and facilities management sector that helps them to select an appropriate response to a new risk. The development of a response approach selection framework to a new sustainability risk is proposed, so that SMEs can select an appropriate response to a new risk whilst they are waiting for more detailed guidance from larger players in the industry.
- The School is investing in two revised e-learning modules on ethics. One of which has already been completed, and the advanced level due for completion in September 2016. Laura Spence noted that quantitative data on engagement is gathered automatically by the School, but little evaluation is done on this. Laura's proposal explored the impact of School members completing the revised ethics (or other) e-learning modules.
 - There was consensus amongst the group that this proposal would be very valuable to ensure the School continuously evaluates the impact of its resources. Considering the high importance of this proposal and its strategic relevance to the overall School, the group felt that it should be funded directly by the School, not the Horizon Group. Shaun supported the idea and noted that this will be taken up with the School directly to explore ways of funding this proposal. This will help give the opportunity for other proposals to receive funding.
 - **After the meeting, it was agreed to hold off on the evaluation of this proposal as it would be redirected to the School for next financial year.**
- Maeve's proposal sought to explore the efficacy of sustainable supply chain strategies in assuring good conditions for supply chain workers. There were some concerns regarding Maeve's proposal as it addressed Health and Safety in a way that may not be of particular interest to the School Board. Shaun noted that from previous experience Health and Safety has not been of particular interest as it is addressed extensively elsewhere. It was noted that the use of

“Health & Safety” may need to be reconsidered. Maeve pointed out that it was working conditions that the proposal was trying to tackle.

- Baris Yalabik’s proposal was to develop a Sustainability Strategy Framework for the School. There was discussion about what this proposal seeks to deliver, as the School has a strategy in place. It was noted that the objective was to create a vision for the “ideal” state. Thus, the hope would be to encourage the development of big-picture expertise,
- There was a discussion on the externalities proposal by Diego Vazquez-Brust. It received considerable interest from group members due to its potential contribution to the School and industry. The proposal is a pilot study intended to inform an application for an industrial PhD studentship between the School and Royal Holloway, with the goal of developing a tool for measuring externalities in relation to risk and opportunities.
- Paul Wyton’s proposal addressed the relationship between client attitude and sustainability. End client attitude/acceptance can have a significant impact upon the ability of a supply chain to deliver on the sustainability agenda. This proposal explores the nature of client engagement, understanding and acceptance of sustainability opportunities and how these impact on decision making.

4. Workshop – Part 2

- Jacqui provided a brief intro to this session. Group members were asked to think of all the proposals and select three that they felt best represented their company’s current interest. Group members were given the opportunity to allocate two votes to a single proposal if they strongly supported a particular project.
- A summary of the proposals were presented on the walls in the form of posters to help as a reminder. The number of votes allocated to the projects were as follows:
 - Academic pitch #1 - Dr Alexander Trautrim, University of Nottingham – **6 Votes**
 - Academic pitch #2 - Maeve O’Loughlin, Middlesex University – **10 Votes**
 - Academic pitch #3 – Dr Baris Yalabik, University of Bath – **0 Votes**
 - Academic pitch #4 - Prof Laura Spence, Royal Holloway – **12 Votes**
 - Academic pitch #5 – Dr Paul Wyton, Sheffield Hallam University – **7 Votes**
 - Academic pitch #6 – Dr Diego Vazquez-Brust, Royal Holloway – **9 Votes**
- Following the voting session, the group members had a further discussion on the outcomes and how best to undertake each project.
- It was further reiterated by Shaun that we may not be able to fund all projects due to the limited budget currently available to the group
- The group members were encouraged to resubmit their revised proposals to Mohammad as soon as possible so these can be presented to the Board for approval.

- Shaun noted that the group should be notified of the outcomes by the next scheduled meeting in September this year.

5. AOB

- Mohammad confirmed that the next meeting will be held in Action Sustainability's new office in London, see below for address details.
- Laura expressed the importance of making sure the Chair position is addressed as soon as possible for a smooth handover. **After the meeting**, Jacqui provided an outline of the role and responsibilities of the Chair, as follows:

- 1- *Chair Horizon Group face to face meetings, typically four per annum*
- 2- *Liaise with the Secretariat to develop and confirm the agenda for the meetings*
- 3- *Check the draft meeting minutes and papers produced by the Secretariat*
- 4- *Produce meeting papers and/or design workshop tasks, if needed*
- 5- *Chair any teleconference meetings, should they be required*
- 6- *Be willing to speak on the phone to new or prospective members of the HG to address any queries they may have*
- 7- *Maintain awareness of activity within the Supply Chain School*
- 8- *Maintain general awareness of R&D and innovation trends within sustainability*
- 9- *Be available to attend related Supply Chain School events and meetings as appropriate (e.g. strategy setting and promotional events)*
- 10- *To represent the group at occasional School events*
- 11- *Maintain a positive, collaborative and forward-looking attitude*

Actions:

- **Mohammad** to circulate today's meeting slides.
- **All academics** to issue a revised version of their proposals within 2-3 weeks.
 - **Post meeting note:** *some of the revised proposals are enclosed with the minutes.*
- Those wishing to nominate themselves, or anyone else for the Chair of the Horizon group starting from January 2017 should contact Mohammad.

Next meeting

- **Date:** Thursday 22nd Sep 2016, 10am – 1pm | Action Sustainability, 1st Floor, 2 Angel Square, London, EC1V 1NY

An SME response selection framework for new sustainability risks in the supply chain

Dr Alexander Trautrim, Lecturer in Supply Chain and Operations Management, Nottingham University Business School, alexander.trautrim@nottingham.ac.uk

Dr Stefan Gold, Assistant Professor in Sustainability Management, Systems and Reporting
Dr Jamie Wardman, Assistant Professor in Risk Management

Rationale

Sustainability risks in supply chains are treated like most other risks: considering likelihood of occurrence and size of the impact. But they can stem from various origins: ethical, environmental, legislative, customer pressure, sanctions, supply shortages, etc. And also their impact and the reason for impact varies: the customers willingness to pay a premium for a sustainable product might disappear if a sustainability image is damaged, the customer may be willing to boycott unsustainable suppliers, litigation, blacklisting, reputation damage, investor withdrawal.

The likelihood of a risk actually becoming a real event in a supply chain is unknown until events have occurred and equally the impact can only be assumed until a number of real events. New risks, for example modern slavery about a year ago, worry SMEs in the supply chain, as they have neither the capability to assess their likelihood and impact to the risk in detail, nor is there much experience of risk events present that they could use to estimate their risk. New risks that do not receive any attention today will arise in the future. SMEs will be confronted with these risks before adequate guidance material is available.

Asking SMEs in the supply chain for their exposure and response to a new risk before sufficient understanding of it is easily enough accessible causes problems as the SME may waste resources by adapting an inappropriate response mechanism that does not address the risk adequately and later needs to be changed or leads to avoidable real events.

We therefore propose the development of a framework for SMEs in the construction and facilities management sector that helps them to select an appropriate response to a new risk. Categorising risks, making structural sense of them and then selecting the appropriate risk response approach is a common concept in many industries (for example the finance sector) and we propose the

development of a response approach selection framework to a new sustainability risk so that SMEs can select an appropriate response to a new risk whilst they are waiting for more detailed guidance from larger players in the industry.

Resources

2 months PhD student [320 hours x £ 15 = £ 4800]

Travel to meet practitioners + present work [£ 200]

Time of Trautrim's Gold and Wardman [in kind: Trautrim's 10 days, Gold and Wardman 5 days each:
20 x £600 = £ 12,000]

Time of research collaborators from Political Sciences, Cultural Studies and the Research Centre on Rights and Justice [in kind: 4 collaborators x 1 hour each x £ 80 = £ 320]

From Action Sustainability members:

- Time from practitioner for guidance to ensure relevance [approximately 5 hours]
- Risk register from a construction and/or facilities management company to test the framework.

Timeframe

Lead time 1 year

Production time about 4 months

Starting April 2017

Outcome

- Framework: What response approach should I select when facing a new supply chain sustainability risk? which can be used in teaching material
- Connecting knowledge from risk management, sustainability, supply chain management
- Guideline framework for SME managers having to deal with supply chain sustainability risk
- Presentation to Action Sustainability

Developing the SCSS “Sustainability Strategy Framework”

Dr Baris Yalabik, Associate Professor, University of Bath School of Management

Aims: To develop a big-picture framework which a professional can use to:

- (i) evaluate the collection of their sustainability activities, with SWOT-type implications. How do metrics, practices, and concepts, often implemented in different parts of an organisation, work together to create desired outcomes?
- (ii) identify potential actions implied by the evaluation above.
- (iii) communicate their evaluation and proposed actions effectively to stakeholders.

The benefits to SCSS:

- (i) the introduction of material/resources, based on the state-of-the art in terms of academic knowledge, that allow a big-picture look at the individual “units” of information that a member might receive.
- (ii) enhanced visibility through communication of the framework via reports, etc.

The objective is not to create a pathway, which the SCSS already provides, but to create a vision for the “ideal” state. Thus, the hope would be to encourage the development of big-picture expertise, supported by the area expertise that SCSS is currently successfully promoting.

Proposed work:

Developing our framework (WPI)	Objective	Duration	Cost
Literature review: Sustainability strategy	Understanding already-existing frameworks (not necessarily in construction/FM)	6 months	£3500 (graduate assistant time)
Workshop for SCSS members	Describing findings Application to context Visibility for Horizon	1 day, U of Bath (?)	£1500 (venue, food, etc)

Application (WP2)	Objective	Duration	Cost
Following-up on WPI outcomes	Confirmation of WPI outcomes with SCSS community (interviews etc)	6 months	£3500 (travel and graduate assistant time)
Introduction of SCSS Sustainability Strategy Framework	Analysis of results, proposal, redrafting, etc	3 months	£1500 (graduate assistant time)



New Horizons for Construction Industry Research Agenda: Understanding Externalities

Problem:

There is insufficient understanding of externalities for the construction industry. This pilot study is intended to inform an application for an industrial PhD studentship between the School and Royal Holloway, with the goal of developing a tool for measuring externalities in relation to risk and opportunities.

Externalities happen when the actions of one actor have an unpaid for benefit – positive externality- or uncompensated loss – negative externality- in another actor. Externalities include social, environmental or even emotional benefits and losses. For example, the pollution of a body of water, air or an open public space by construction works generates a loss of welfare in the community. If the community is not compensated for the loss, there is a negative externality. An example of positive externality is "Planning gain" schemes, whereby a developer delivers benefits to a community in exchange for obtaining consent to start works.

A type of externalities that is particularly understudied in the construction industry is network externalities. Network externalities occur when network connections by one entity impact others (positively or negatively). If positive network externalities are not accounted for there may be inefficient investment in networked options¹ (i.e not enough collaboration, for example: supply chain inventory management). Network externalities are common occurrence in supply chains, and therefore especially relevant to the school.

Failure to identify and manage externalities can result in supply chain inefficiencies, loss of corporate value, reputational damage, missed opportunities to increase value and overall poor sustainability. Better understanding of how to manage externalities should be a strategic priority for the construction industry research agenda². The extent of potential problems is substantial, with reports showing that construction is 5th in the rank of sectors generating environmental externalities, at an estimated global environmental cost of \$ 125.000 million³. (On the other hand, there is also significant scope for positive externalities and knowledge spill over. For example, through interaction between suppliers to promote knowledge exchange and building performance

¹ Sarkis, J., Zhu, Q., & Lai, K. H. (2011). An organizational theoretic review of green supply chain management literature. *International Journal of Production Economics*, 130(1), 1-15.

² Alwan, Z., Jones, P., & Holgate, P. (2016). Strategic sustainable development in the UK construction industry, through the Framework for Strategic Sustainable Development, using Building Information Modelling. *Journal of Cleaner Production*.

³ Trucost (2010) Universal ownership: why environmental externalities matter to institutional investors, United Nations-Principles of Responsible Investment Report

standards⁴ ; or through coordinated action of dominant firms to foster innovation, disseminate codes of conduct and avoid lock-in to inferior technologies,

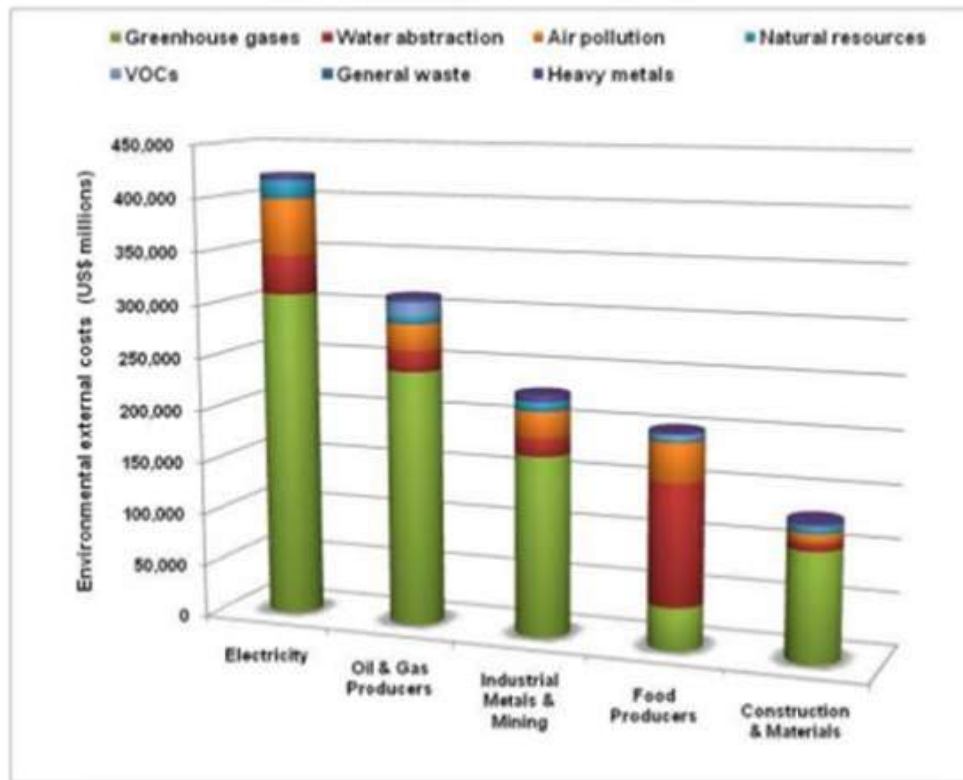


Figure 1: Environmental Externalities by Economic Sector

Source: Trucost (2010) Universal ownership: why environmental externalities matter to institutional investors, United Nations-Principles of Responsible Investment Report

In order to mitigate the risks, and maximise the opportunities afforded by externalities, there is a need for conceptual and practical tools that construction companies can use to:

- Identify supply chain externalities (positive and negative)
- Evaluate the impacts of internalisation on corporate value
- Develop strategies to manage externalities in supply chains in order to protect existing value from negative externalities and create added value from positive externalities.
-

This pilot project is intended to be the foundation of a research proposal which is expected to deliver such tools. The overall framework for the project will be based on network externalities theory (Liebowitz & Margolis, 1996) , communities and collective practice (Roberts, 2006) and the 'boundaries and flows' perspective of supply chains (Sarkis, 2012),

Aim and objectives:

Aim: To understand how to manage externalities to protect and increase value in the construction industry supply chain

⁴ de Vries, H. J., & Verhagen, W. P. (2016). Impact of changes in regulatory performance standards on innovation: A case of energy performance standards for newly-built houses. *Technovation*, 48, 56-68.

Objective One: Synthesis of existing knowledge on externalities in the construction industry and its supply chains. Desk research to identify gaps and controversies in current conceptual and empirical research literature.

Objective Two: Identification of externalities – Quantitative- Survey of School partners to identify externalities and perceived impacts of managing externalities in corporate value

Objective Three: Understanding strategies- Qualitative- Four interviews with partners to explore the strategies used to manage externalities.

Objective Four: Develop a joint proposal between Royal Holloway and the School for an ESRC CASE studentship 2017. The bid will be closely informed by the findings from Objectives one-three, and will be directed to further explore collaborative pathways to manage externalities considering the School as a community of practice, while engaging local communities in the identification of externalities.

Timeline/work packages:

One-year research programme.

Work package One: Desk Research- Literature review.

Work package Two: Quantitative -On-line Survey (Qualtrics or Survey Monkey) of externalities in School partners. The survey will identify perceived externalities, internalization impact and actions taken to manage externalities. (Month)

Work package Three: Qualitative- Four in-depth semi-structured interviews with representatives of School partners and one focus group with suppliers at a School event.

Deliverables for the School:

1. Literature Review on Externalities for the construction industry
2. Summary of survey results and identification of key areas of concerns for the School.
3. Proposal for a Module on Externalities Management
4. External Funding proposal: The project will be used as platform to organise a proposal to apply for The South East-Doctoral Training Centre (SE-DTC) ESRC CASE-style studentships and fund a doctoral researcher based at the School commencing in October 2017. CASE Awards are designed for research students to carry out projects within the Social Sciences in collaboration with companies/business/policy organisations etc. If successful, the PhD will be jointly supervised by the School and Royal Holloway. Note: SE-DTC case studentships have a high rate of success since only universities in South East England can apply. In 2016 all applications were funded.

Budget requested and approximate breakdown of resources / Additional funding or value in kind

	Task	Cost
Research assistant Post graduate Grade 6. Spine 1	Literature review, online survey implementation and summary report, interviews and focus group transcription, NVIVO analysis and briefing (26 days x£ 19.25/hours)	3816
Travel	Travel to four interviews and one focus group (5 x £30):	150
Lead researchers:	Survey design and report, externalities module proposal, and funding proposal:	612
Vazquez-Brust	Coordination	
Spence	Advice	375
Other	Indirect and States	356
	Total cost	4925

Potential Added Value from CASE studentship: £75,000⁵

Diego Vazquez-Brust & Laura Spence. Royal Holloway, University of London

⁵ Note that ESRC CASE funding requires the non-academic partner to make a contribution of £4000/year: £2000 for the student and £2000 for the academic partner (contributions can include in-kind)

Social Sustainability Action for Employees (SoSAFE) Project

Exploring efficacy of sustainable supply chain strategies in assuring good conditions for supply chain workers

- Proposal for Pilot Survey -

Background and Problem Statement

Workers are integral stakeholders to organisational success and the assurance of good working conditions are important components of the social dimension of sustainability, and as such, this can be promoted and determined through the supply chain in contracting and global supply industries (EU-OSHA, 2012). In recent years, sustainable supply chain strategies have come to the fore due to growing market and stakeholder demands for responsible supply chain activity (McCarthy et al, 2010; Hervani, 2005) and these have been considering occupational conditions and risk management. Major global incidents including the building collapse in Bangladesh (Mauldin and Kapner, 2013) and the Deepwater Horizon accident (Chazan, 2010) have illustrated the supply chain level impacts on worker rights to safe work but also corporate reputations.

In considering social sustainability for workers in sustainable supply chain processes, there may be false assumptions that existing strategies support risk prevention effectively. These come both from the traditional paradigm of risk management practice for workers safety (Hollnagel, 2012) and also sustainable supply chain management (SSCM). Assumptions in risk management relate to the 'find and fix' approach to causation and risk in a simplistic bi-modal approach with associated measure and manage processes to drive performance towards a negative entity of zero through rules. It looks to design of work systems 'as imagined' instead of work 'as done', and then requires standardisation in risk treatment using a 'one size fits all' strategy of rules when driven through SSCM. Generic treatment of organisations in SSCM under the legislated approach may drive inequity in the treatment of smaller or less resourced organisations, if effective at all in assuring good worker conditions. Bureaucratic standardised rules may in fact limit variation and flexibility required by resilient organisations (Hollnagel, 2012). Contract conditions may actually introduce risk to workers when considering resourcing, finance and capabilities. Traditional SSCM assumes that PQQs, codes of conduct and certifications, auditing and reviews will assure or improve supply chain worker risk management but there is various sources of evidence in the literature that this may not always be the case and influence of working conditions may be incremental at best (Saunders, 2015; James et al, 2012; Parsa et al, 2016; LeBaron and Lister, 2015).

Alternative approaches to risk management following work by Hale, Dekker and Hollnagel highlight possibilities for assuring greater value from human capital potential under the scope of social sustainability. This project looks to determine possibilities for application of a new paradigm of assuring good conditions for workers in sustainable supply chain management.

Aim and objectives

This pilot project proposal supports a previously agreed larger doctoral research project through an initial theory construction and support stage, and surveying of the supply chain schools existing member base. The aim is to determine existing operable processes from existing theory and practice that support the new paradigm of risk management for good working conditions in sustainable supply chain management. The member survey then aims to identify any existing evidence of good practice relative to this new *modus operandi* in sustainable supply chain processes.

This provides support of greater rigour for determining the main doctoral project case study choices, and also provides greater capability to determine a model of good practice as a critical research outcome for use by the sustainable supply chain school. Theory construction and support will be undertaken by desktop study and select interviews with some school partners/members including horizon group members. Subsequently, a questionnaire survey of school partners/members will be completed to scan existing practice.

Timeline/work packages

Work Packages	June	July	Aug	Sept	Oct
<u>WP1 The Background</u>					
• Desktop Study	■	■			
• Interviews		■	■		
<u>WP2 The Survey</u>					
• Develop & Pilot Survey			■		
• Survey			■	■	
• Analysis				■	■
<u>WP3 The Report</u>					
• Write-up				■	■
• Final Completion					■

Deliverables for the School

Project Deliverables will support the current work of the supply chain school relating to social sustainability and responsible procurement.

- **Support of the leadership position** the school holds in driving the social sustainability agenda forward for supply chains in recognising workers and associated working conditions as a core component of valuing human capital.
- A **research report** will be completed for the school which outlines how school members currently consider assurance of good working conditions in sustainable supply chain management; insight into the role of risk management in sustainable supply chain management (SSCM) processes for worker conditions; and member opinions as to existing opportunities, barriers and efficacy of current SSCM approaches to assuring good working conditions following the new paradigm of risk management as investigated.

Budget requested and approximate breakdown of resources / Additional funding or value in kind

With regard to completion of the work packages, a costing based on a daily research rate has been provided in addition to the fees associated with administering the online survey. This allows costing for 12 days research input to the project. The total cost for this is £3805. Time and expenses for travel, meetings and input from other horizon group members has been budgeted at £250. Therefore, in summary, the full cost of the proposal requested is £4055.

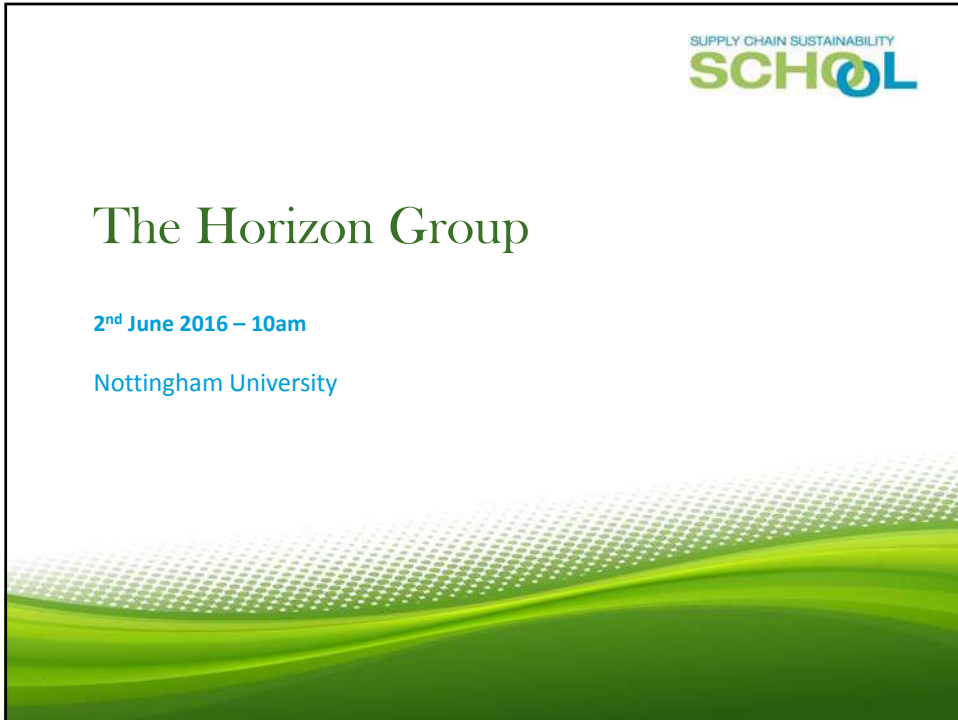
Additional value in kind is matched through time allocated by the researcher for project completion. 12 days of volunteered time as value in kind is required to bring the pilot project to completion. This value in kind for researcher time is worth approximately £3600. In addition, this research project proposal supports seed funding for greater success of a larger doctoral project which is being undertaken in support of the sustainable supply chain school free of any charge. The cost for a doctorate in professional studies at the researcher’s university is £22,000. Value in kind is therefore worth £25,600 in total

The ratio of value to investment is 5:1.

The Horizon Group

2nd June 2016 – 10am

Nottingham University



SUPPLY CHAIN SUSTAINABILITY
SCHOOL

Agenda

- Welcome and Introductions
- Actions from Previous Meeting
- Workshop – Part 1
 - Academic Presentations
 - Q&A and Panel Discussion
- Workshop – Part 2
 - Recap and Voting
 - Discussion of outcome
 - Action Planning
 - Next Steps
- AOB

3

supplychainschool.co.uk – building sustainability

SUPPLY CHAIN SUSTAINABILITY
SCHOOL

2. Introductions



4

supplychainschool.co.uk – building sustainability

Actions from Previous Meeting



5

supplychainschool.co.uk – building sustainability

Actions

•Mohammad to:

- Circulate the slides from the meeting ✓
- Confirm target date for more advanced business ethics module ✓ (**September 2016**)
- Arrange conference call with Shaun and Paul to discuss feedback on using e-learning modules for teaching at University ✓
- Provide an update on the IEMA working group (**Shaun**)
- Coordinate a doodle poll for the academics' teleconference meeting ✓

•Maeve to:

- Send Mohammad guidance documents relating to calculating the social return of investment where financial proxies are used to account for non-financial efforts. ✓

•Laura to:

- Provide an approximate breakdown of how many hours time it had taken to develop the revised business ethics module ✓

•All

- Those wishing to nominate themselves, or anyone else for the Chair of the Horizon group starting from January 2017 should contact Mohammad X (**No nominations received to date**)

6

supplychainschool.co.uk – building sustainability

Introduction to the Workshop

SUPPLY CHAIN SUSTAINABILITY
SCHOOL

Part 1

A hand-drawn diagram illustrating a process cycle. It consists of three ovals: 'IDEA' at the top, 'PLAN' on the right, and 'ACTION' on the left. Arrows connect them in a clockwise cycle: from 'IDEA' to 'PLAN', from 'PLAN' to 'ACTION', and from 'ACTION' back to 'IDEA'. A hand holding a black marker is shown at the bottom left, appearing to have just finished drawing the 'ACTION' oval.

7

supplychainschool.co.uk – building sustainability

Academic Pitch # 1

SUPPLY CHAIN SUSTAINABILITY
SCHOOL

Dr Alexander Trautrim

The logo for The University of Nottingham, featuring a stylized blue tower icon to the left of the text 'The University of Nottingham'.

UNITED KINGDOM - CHINA - MALAYSIA

8

supplychainschool.co.uk – building sustainability

Academic Pitch # 2



Maeve O'Loughlin



9

supplychainschool.co.uk – building sustainability

Academic Pitch # 3



Dr Baris Yalabik



10

supplychainschool.co.uk – building sustainability

Panel Q&A

SUPPLY CHAIN SUSTAINABILITY
SCHOL



11

supplychainschool.co.uk – building sustainability

Comfort Break

SUPPLY CHAIN SUSTAINABILITY
SCHOL



12

supplychainschool.co.uk – building sustainability

Academic Pitch # 4



Prof Laura Spence & Dr Diego Vazquez-Burst



13

supplychainschool.co.uk – building sustainability

Evaluating the impact of the School's revised Ethics E-Learning Modules



Problem:

- The School is investing in two revised e-learning modules on ethics. Quantitative data on engagement is gathered automatically but little evaluation is done on this.

Aim and objectives:

- Aim: What is the impact of Supply Chain Sustainability School members completing the revised ethics e-learning modules?
- Objective One: E-learning module competence evaluation - Quantitative analysis – What connection is there between successive assessments of the same module and respective completion of the introductory (module one) and intermediary (module two) assessments.
- Objective Two: Economic and social impact evaluation – Qualitative analysis – Interviews with those who have completed one/both ethics e-learning modules, and those who have elected not to do so. Probing of the impact if any of the modules on practice (economics and social outcomes).

14

supplychainschool.co.uk – building sustainability

Timeline/work packages:

- Two year research programme allowing for some longitudinal analysis of the impact of the modules (Module 1 was available from May 2016, Module 2 is still in preparation at time of writing). September 2016-August 2018. Work packages to occur simultaneously.
- The work will be informed by the well-established : Knowledge , Attitudes, Behaviours Model of evaluation (KAB), giving the opportunity to explore the link between knowledge about ethics, attitude about ethics and ethical behaviour among Supply Chain school members. NB: The study will not assume a positive link but seek to better understand any connections between knowledge, attitude and behaviour.
- Work package One: Quantitative analysis of statistical data on module uptake and achievement.
- Work package Two : Qualitative analysis via 20 interviews and/or focus groups.
- Work package Three: Analysis and dissemination.

Deliverables for the School:

- A summary report of the evidence for impact of two core e-learning modules in the School's programme.
- Evaluation of the efficacy of the modules in changing practice.
- Recommendations for strengthening the value of the e-learning modules and/or alternative support for learning among School members.
- A model for evaluating other e-learning modules as a way of achieving positive social change

Budget requested and approximate breakdown of resources / Additional funding or value in kind

(Estimates subject to full calculation by RH Research & Enterprise department)

- | | | |
|---|-------------|-----------------|
| ➤ Research assistant: Quantitative analysis and interviews, transcription, initial analysis | | £2,000 |
| ➤ Travel to interviews (geographical spread preferable) | 20 x £75 = | £1,500 |
| ➤ Lead researchers: full analysis and report writing: | | |
| • Spence 10 days (half of which we offer in kind) | 10 x £750= | £7,500 £3750 |
| • Vazquez-Brust 10 Days (half of which we offer in kind) | 10 x £550 = | £5,500 £2750 |
| ➤ Total: £10,000 over two years | | |

SUPPLY CHAIN SUSTAINABILITY
SCHOL

Knowledge,
Attitudes,
Behaviours model

17

supplychainschool.co.uk – building sustainability

Academic Pitch # 5

Dr. Paul Wyton

SUPPLY CHAIN SUSTAINABILITY
SCHOL

**Sheffield
Hallam
University**

18

supplychainschool.co.uk – building sustainability

Impact of client attitude and acceptance of sustainability on the delivery of more sustainable built environment



- Understand client engagement and acceptance of sustainability
- Understand supply chain perceptions of client engagement with and acceptance of sustainability
- Explore the impact of perceptions of delivering a sustainable built environment
- Survey
- Case study interviews
- Completed in spring 2017
- **Estimated cost: £10K**

Academic Pitch # 6



Dr Diego Vazquez-Burst & Prof Laura Spence



Panel Q&A

SUPPLY CHAIN SUSTAINABILITY
SCHOL



21

supplychainschool.co.uk – building sustainability

Lunch

SUPPLY CHAIN SUSTAINABILITY
SCHOL



22

supplychainschool.co.uk – building sustainability

Introduction to the Workshop



Part 2



23

supplychainschool.co.uk – building sustainability

Let's Recap & Vote



24

supplychainschool.co.uk – building sustainability

- Discussion of Outcomes
- Action Planning
- Next Steps

AOB?



7. Date of next Meeting?



Tuesday 22nd Sep 10 am
Venue: Action Sustainability - London

27

supplychainschool.co.uk – building sustainability



28

supplychainschool.co.uk – building sustainability



Response approach selection to supply chain sustainability risks

Dr Alexander Trautrimis

alexander.trautrimis@nottingham.ac.uk



Compliance issues

- Environmental
- Ethical
- Customers
- Legislation and litigation
- Auditing
- Allocation of risk response resources



Outcome

- What response is right for what type of supply chain sustainability risk?
- Connecting knowledge from risk management sustainability, supply chain management
- Guideline framework for managers having to deal with supply chain sustainability risk
- Structured selection of appropriate risk response



Timeline

- Finding the right person
- Combining literature
- Practitioner feedback for relevance
- 3 months production time
- 1 year lead time

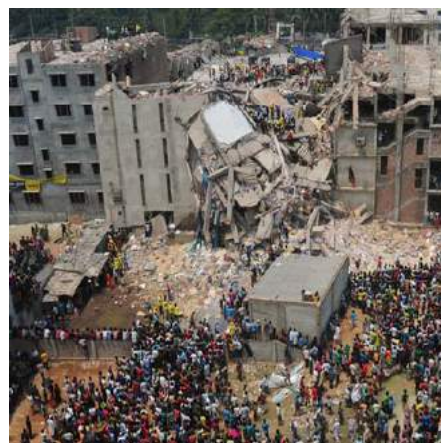


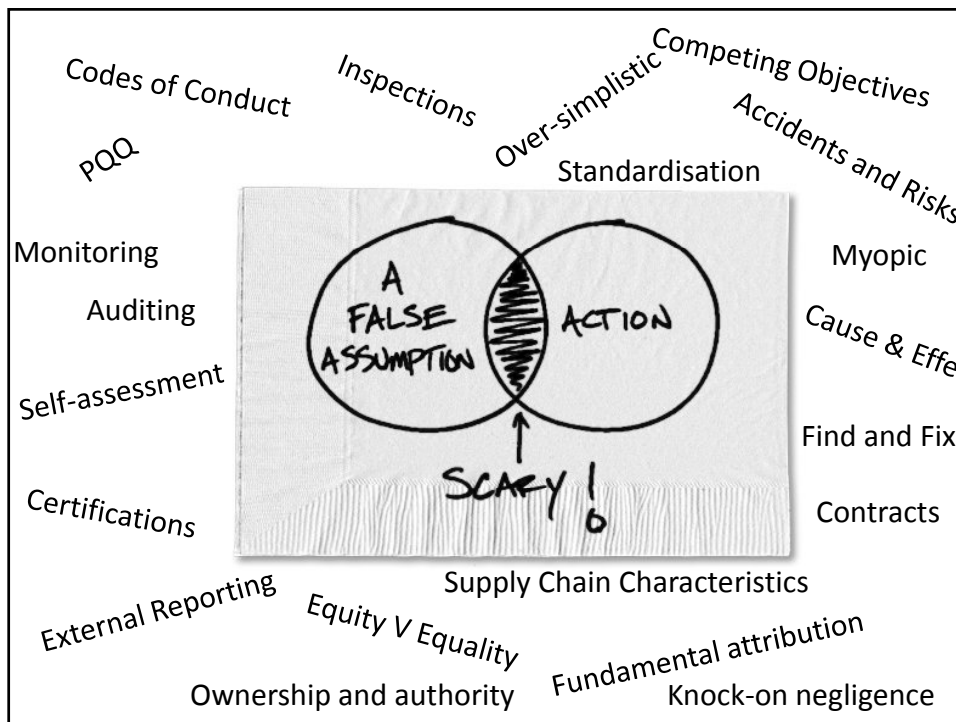
**Social Sustainability
Action for Employees
(SoSAFE)**

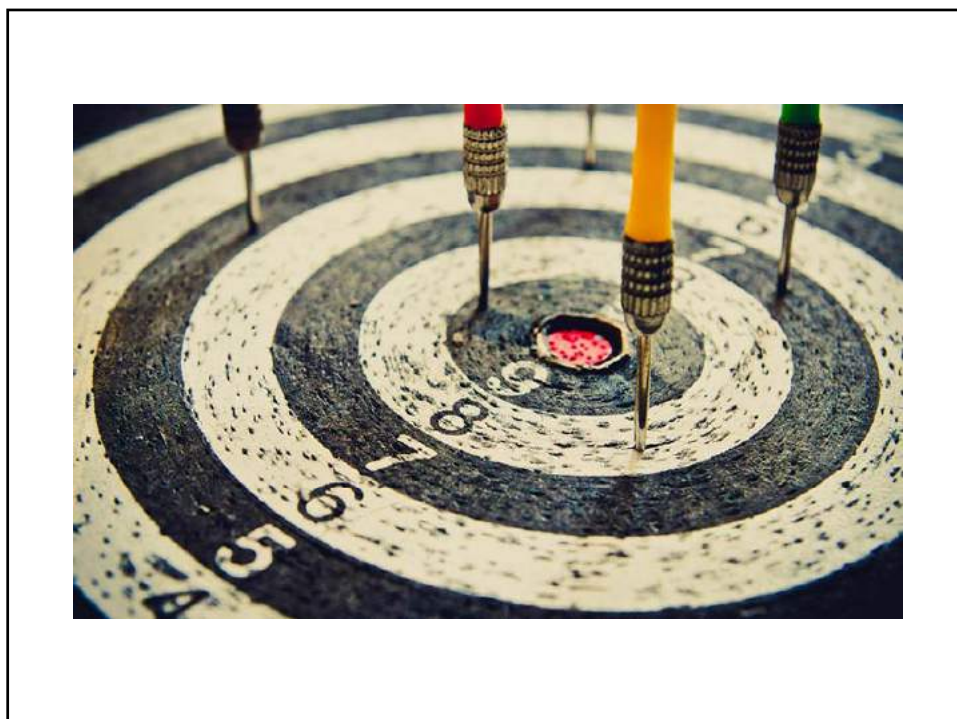
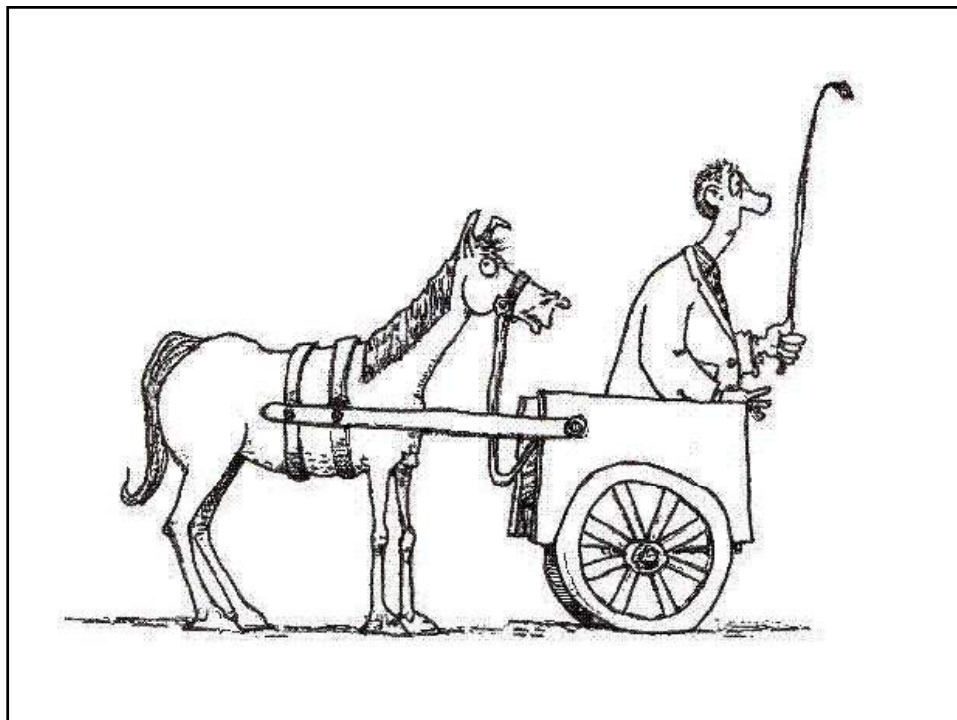
*Exploring efficacy of sustainable supply chain
strategies in assuring effective occupational
safety and health outcomes*

Proposal for an Initial Pilot Survey

In support of doctoral research
Maeve O'Loughlin – Middlesex University London






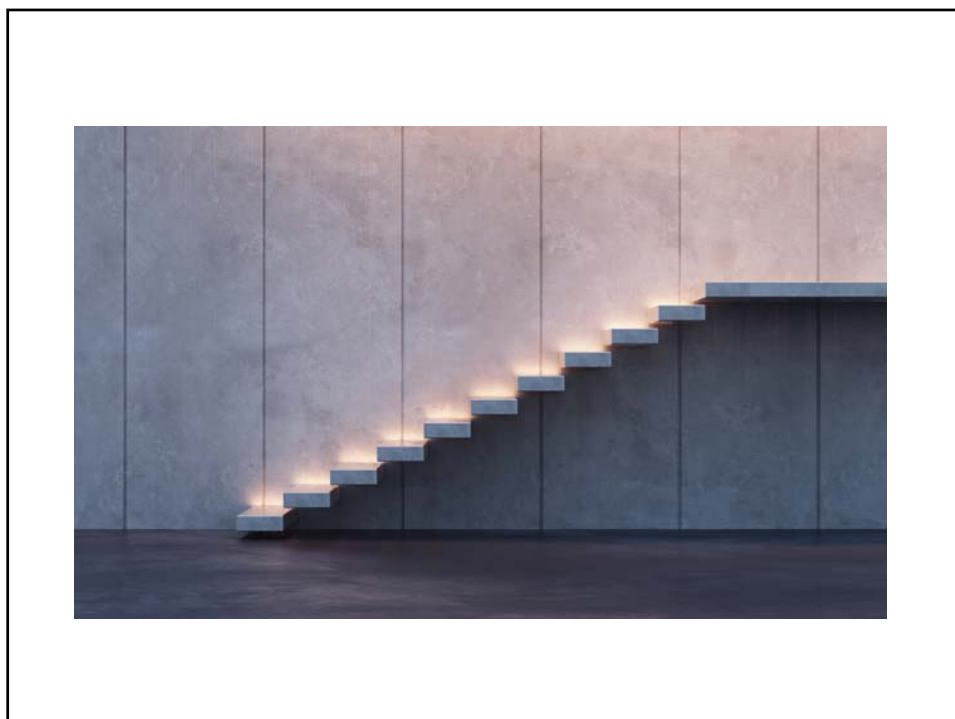




the work packages & time line

Work Packages	June	July	Aug	Sept	Oct
<u>WP1 The Background</u>					
• Desktop Study					
• Interviews					
<u>WP2 The Survey</u>					
• Develop & Pilot Survey					
• Survey					
• Analysis					
<u>WP3 The Report</u>					
• Write-up					
• Final Completion					

	horizon group project support	£250
	[Time/expenses support provision]	
	research time buy-out & survey	£3805
	[4 days per work package + survey cost]	_____
	total	£4055





Middlesex University London

Social Sustainability Action for Employees (SoSAFE) Project

Exploring efficacy of sustainable supply chain strategies in assuring effective occupational safety and health outcomes

- Proposal for Pilot Survey -

Maeve O'Loughlin

Background and Problem Statement

Occupational health and safety (OHS) is an important component of the social dimension of sustainability, and as such, is promoted and determined through the supply chain in contracting and global supply industries. (EU-OSHA, 2012). In recent years, sustainable supply chain strategies have come to the fore due to growing market and stakeholder demands for responsible supply chain activity (McCarthy et al, 2010; Hervani, 2005) taking occupational health and safety in to account. Major global incidents including the building collapse in Bangladesh (Mauldin and Kapner, 2013) and the Deepwater Horizon accident (Chazan, 2010) have illustrated the supply chain level impacts on worker safety and corporate reputations. What is most interesting in considering the role of health and safety in sustainable supply chain processes is that there may be false assumptions that existing strategies support risk prevention effectively. This come both from the traditional paradigm of OHS practice (Hollnagel, 2012) and also sustainable supply chain management (SSCM). Assumptions in OHS relate to the 'find and fix' approach, 'measure and manage' processes and standardisation in risk treatment using a 'one size fits all' strategy when driven through SSCM. Generic treatment of organisations in SSCM under the legislated approach may drive inequity in the treatment of smaller or less resourced organisations, if effective at all in assuring good worker conditions. Alternative approaches to risk management may highlight possibilities for assuring greater value from human capital potential. It is also worth noting that contract conditions may actually introduce risk to workers when considering resourcing, finance and capabilities. Traditional SSCM assumes that PQOs, codes of conduct and certifications, auditing and reviews will improve OHS for supply chain workers but there is also evidence in the literature that this may not always be the case (Saunders, 2015; James et al, 2012; Parsa et al, 2016; LeBaron and Lister, 2015).

Aim and objectives

This pilot project proposal supports a larger doctoral research project through an initial theory construction and support stage, and surveying of the supply chain schools existing member base relative to the role of OHS in sustainable supply chain processes. This provides support of greater rigour for determining the doctoral project case study samples, and also greater capability to determine a model of good practice as a critical research outcome. With this in mind the objectives of this research proposal for funding relate to initial theory construction and support relative to SSCM processes and links to OHS. This will be undertaken by desktop study and select interviews with some school partners/members including horizon group members. Subsequently, a survey of school partners/members will be completed to gain insight into the role of OHS in SSCM.

Timeline/work packages

Work Packages	June	July	Aug	Sept	Oct
WP1: The Background					
• Desktop Study					
• Interviews					
WP2: The Survey					
• Develop & Pilot Survey					
• Survey					
• Analysis					
WP3: The Report					
• Write-up					
• Final Completion					

Deliverables for the School

Project Deliverables will support the current work of the supply chain school relating to social sustainability and responsible procurement.

- **Support of the leadership position** the school holds in driving the social sustainability agenda forward for supply chains in recognising OHS as a core component of valuing human capital.
- A **research report** will be completed for the school which outlines how school members currently consider good working conditions and health and safety for their supply chains; insight into the role of OHS in sustainable supply chain management (SSCM) processes; and member opinions as to existing opportunities, barriers and efficacy of current SSCM approaches to assuring good health and safety outcomes.
- Website publication of a **briefing document** for school stakeholders and members

Budget requested and approximate breakdown of resources / Additional funding or value in kind

With regard to completion of the work packages, a costing based on a daily research rate has been provided in addition to the fees associated with administering the online survey. This allows for 12 days research input to the project which is conservative while recognising the capability of this funding to transfer 12 days of administrative duties internally at the university. The total cost for this is £3805.

In recognising the academic research expertise within the horizon group, it is considered pertinent that project support from other horizon group academics be costed in order to provide a recognised means of supporting this pilot project taking time/expenses into account. For this purpose £250 has been budgeted for this.

In summary, the full cost of the proposal is £4055. Additional value in kind is matched through time allocated by the researcher to the project completion.

SCSS Sustainability strategy framework

(bid for Horizon Group funding)

Dr Baris Yalabik,
 Associate Professor of Operations Management

Developing a strategy framework

- ▶ Currently, SCSS categorises...
 - ▶ ...modules as “Beginner”, “Intermediate”, or “Advanced”
 - ▶ ...resources in no systematic order
- ▶ Area expertise, but not big-picture expertise
 - Points to lack of direction around how well groups of metrics, practices, concepts, etc work together.
 - **Links between practices and outcomes are ambiguous!** (at least in our context)

Question: How do we turn a collection of good “chapters” into a meaningful “story” – a strategy framework?

- ▶ For example, long/short term, revenue/cost?

Strategy framework development – proposed work



Developing our framework (WPI)	Objective	Duration	Cost
Literature review: Sustainability strategy	Understanding already-existing frameworks (not necessarily in construction/FM)	6 months	£3500 (graduate assistant time)
Workshop for SCSS members	Describing findings Application to context Visibility for Horizon	1 day, U of Bath (?)	£1500 (venue, food, etc)
Application (WP2)	Objective	Duration	Cost
Following-up on WPI outcomes	Confirmation of WPI outcomes with SCSS community (interviews etc)	6 months	£3500 (travel and graduate assistant time)
Introduction of SCSS sustainability strategy framework	Analysis of results, proposal, redrafting, etc	3 months	£1500 (graduate assistant time)

▶ 3

Externalities



Diego Vazquez-Brust & Laura Spence
Proposal for consideration of Horizon Group

Objectives



- Develop an understanding of state-of-the art research and policy in externalities in the construction industry supply chains
- Identify needs and challenges of SSCS partners
- Develop the basis to present a proposal to ESRC to fund a jointly supervised phd, who will work with a partner company to diagnose areas in needs of intervention and strategies/models to engage communities in the management of externalities.
- Gather material to be used as case studies/ models/knowledge units in the SSCS
- Develop material for dissemination.

What are externalities



Externalities happen when the actions of one actor have an unpaid for benefit or uncompensated cost in other actor.

Positive or negative impacts on society that occur as a by-product of production and exchange

They are not captured by market supply and demand curves so there is inefficient allocation of resources

What is a positive externality?

An **unpaid-for benefit** to other members of society generated as a side effect or consequence of an economic exchange, such as between a buyer and a seller.

What is a negative externality?

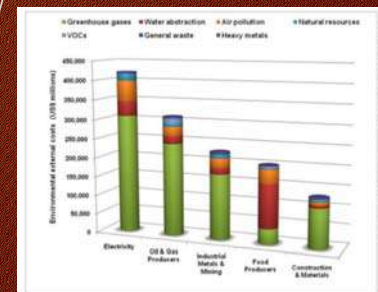
An **uncompensated cost** borne by members of society (directly or indirectly) generated as a consequence of an economic exchange, such as through market transactions

Why are externalities important for SSCs?

- Exchanges in supply chains are associated with network externalities
- Network externalities occur when network connections by one entity impact others (positively or negatively)
- If positive network externalities are not accounted for there may be *inefficient investment* in networked options (i.e. not enough collaboration)
- Example: inventory management

Knowledge Spillover Externality: An unpaid for benefit that derives from the free diffusion of knowledge, resulting in the spread of processes and technologies that can reduce production costs

- If negative network externalities are not accounted for they will be overreliance on supply chain configurations with negative social and constitute a latent political risk
- Example:
- Suppliers in environmental heavens or suppliers in countries with poor human right/standards
- **The Construction Industry is 5th in the rank of sectors generating negative environmental externalities (Trucost, 2010)**



Methods



1. Desk Research: Literature Review on Externalities

Scope:

1. Background

Review of definitions, types of externalities (negative and positive), externalities in supply chains, strategies to manage externalities. Theoretical approaches

2. Externalities in the UK construction industry: industry-specific issues, community and regulators perceptions. Case studies of good practice. Policies and challenges

2. Action Research: Organization of scoping exercise with partners:

Online Survey to identify major areas of concern and actions taken by partners

Skype interviews to develop research topics jointly with partners.

Outcomes and Costings



Outcomes:

Academic Literature Review/ Module Proposal

Learning material: Case study of management of externalities in the construction industry.

One Pager Policy Briefing.

Report on pilot surveys results:

Costings:

- 30 days Research Assistant Category 7: £ 4800
- Travel and subsistence: £ 1000
- Laura Spence 4 days: 1500 (+1500 in kind)
- Diego Vazquez 8 days: 0 (+4000 in kind)
- Total Cost: 12.800
- Requested: 7300 , In kind: 5500

