

Fostering Innovation Through Public Procurement - a research study

A report for NICVA
By Envision

FOREWORD

This report examines how public procurement in Northern Ireland can better encourage innovation – the creation of new processes, products, ideas and services.

Two factors led NICVA to commission this research. One was a need to expand the conversation around the widely accepted goal of ‘rebalancing’ the Northern Ireland economy. The public sector is often seen to be ‘crowding out’ the private sector, leading to the notion that if the public sector is scaled back, the private sector will simply grow into the vacant space. This neglects the active role of the state - what Mariana Mazzucato terms the ‘entrepreneurial state’ - in generating economic growth.

One of the most important ways in which government can foster growth is by encouraging innovation. Across the European Union, there is growing interest in the potential of government to create demand for innovation through its procurement function – for example by acting as a lead buyer of innovative products, or by requesting goods and services that do not yet exist. Rather than regarding Northern Ireland’s relatively large public sector as a problem, we need to harness it to our advantage.

The second reason for commissioning this research is the difficult fiscal environment faced by the Northern Ireland Executive. If we rely on simply cutting budgets but not changing services then we will likely just make things worse. To be more effective requires innovative ways of providing services and of approaching social and economic problems. Yet voluntary and community groups are strongly of the opinion that their ability to deliver services and address social and economic need in innovative ways is not being fully realised by public procurement practices - ultimately to the detriment of the citizens who fund and use public services. As this research shows, that there is unrealised potential for public procurement to encourage innovation is accepted not just within the voluntary and community sector, but also within the private sector, and indeed it is acknowledged within government.

Importantly, the research also provides an analysis of the major barriers to encouraging innovation through procurement in Northern Ireland, and proposes a number of practical measures to overcome these. As such, we think, it makes a significant contribution to a more sophisticated strategy for rebalancing and revitalising the Northern Ireland economy.

Seamus McAleavey

NICVA Chief Executive

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EXECUTIVE SUMMARY

This study has focused on:

- (i) The extent to which public procurement policy and practice in Northern Ireland encourages innovation; and
- (ii) The proposal of recommendations for improvement.

The study has involved a combination of:

- Desk research – a review of published work on fostering innovation through public procurement: both the successes and the barriers.
- Interviews, a survey of suppliers and in-depth focus group discussions with public sector buyers and the supplier base:
 - To gather views and experiences of both the public sector and the supplier base on how well innovation is encouraged through public procurement.
 - To explore the barriers faced by both buyers and suppliers in public procurement of innovation.
 - To gather opinion on how barriers might be overcome, and how the public sector might better foster innovation through procurement.
- The development of case studies on how public procurement has encouraged innovative products and services.

Key Findings

The research highlights a number of important issues:

1. While there are a number of successful initiatives in Northern Ireland which encourage innovation, the procurement processes available under the EU Procurement Directive, which can facilitate the procurement of innovative products and services, are not widely used by Northern Ireland public sector bodies.
2. These can be lengthy and costly processes and there is the perception within the public sector that these processes carry a higher risk of legal challenge from suppliers than the standard procurement procedures.
3. The public sector buyers interviewed experience a number of barriers to procuring innovative products and services. The most critical is the risk of legal challenge by a supplier and the financial and professional implications of this. This threat has largely led to public sector buyers choosing more structured procurement procedures and setting restrictive tender specifications, which in turn limit a supplier's ability to offer more innovative products and services.
4. The supplier base are committed to offering innovative products and services to the public sector but they too are experiencing barriers. The most critical barriers faced by suppliers are restrictive tender specifications and the lack of pre-procurement engagement with buyers.

While these are the most critical barriers faced by the buyers and suppliers involved in this study, there are a number of other barriers identified through the research and which must be addressed:

- **Additional Buyer Barriers**
 - *A lack of pre-procurement market engagement with suppliers*
 - *A lack of buy-in from commissioners*
- **Additional Supplier Barriers**
 - *A lack of demand for innovative products and services in the public sector*
 - *A lack of public sector knowledge and experience of specific industries*
 - *Inadequate consideration of whole-life costs*
 - *A lack of cross-departmental budget collaboration*

The best practice examples reviewed as part of the research and the suggestions provided by both buyers and suppliers for overcoming these barriers have a number of common themes.

A number of aspirations under each theme are presented here which, if achieved would help to overcome barriers to innovation on both the supplier and buyer sides.

Theme	Barriers to Innovation	Aspiration
Knowledge & Skills	<p>A lack of public sector knowledge of specific industries</p> <p>A lack of demand in the public sector for innovative products and services</p>	<p>Public sector commissioners and buyers with greater market knowledge</p> <p>Greater commercial skills within the public sector</p>
Communication	<p>A lack of pre-procurement market engagement between buyer and supplier</p> <p>A lack of buy-in from commissioners</p>	<p>Greater communication between commissioner/buyer and suppliers</p>
Collaboration	<p>A lack of cross-departmental budgeting to facilitate cost savings</p>	<p>Cross-departmental budgeting</p>
Removing/Reducing Managing Risk Risk of legal challenge from suppliers	<p>Buyers too risk averse</p>	<p>A public sector which can encourage innovation without the threat of the following risks:</p> <ul style="list-style-type: none"> • Challenge and litigation • Delaying contract commencement • Financial loss • Personal/professional risk <p>A public sector equipped to manage risk in the procurement of innovation</p>
Changing Tender Practice	<p>Too restrictive tender specifications</p> <p>A lack of understanding of the processes available to procure innovative products and services</p> <p>A lack of adequate consideration of total life costs</p>	<p>Contracts with less restrictive specifications in order to encourage innovative solutions</p> <p>Terms of Reference which explicitly demonstrate how total life costs have been considered when setting the weighting for cost</p>

Key Recommendations

Based on these research findings, the key recommendations emerging from the study are as follows:

Theme 1: Knowledge & Skills

- The public sector should commit to the continuing / enhanced development of commissioners' and buyers' market knowledge. This will enable public sector organisations to carry out more market research in advance of the procurement process, particularly in markets that involve fast-moving technology.
- The public sector should commit to developing commissioners' and buyers' commercial skills, such as is demonstrated by the UK Crown Commercial Service commercial training programme. This would support them in their work to identify and evaluate innovative products and services, and in turn could achieve greater value for money in contracts.

Theme 2: Communication

- To facilitate greater communication between commissioners and buyers, the public sector could introduce category buyers where appropriate, with knowledge of specific industries. This would create a stronger link between commissioners and frontline buyers to help demonstrate the benefits of new, innovative products and solutions.
- The public sector should communicate more with suppliers and make more use of pre-procurement market engagement processes where appropriate, and particularly in markets that involve fast-moving technology. This will provide the public sector with a greater insight into what's on offer in the market before developing a specification.
- This communication could be further facilitated by the introduction of an electronic Public Sector Innovation Platform where suppliers and buyers can engage on a regular basis. Well in advance of a procurement process, buyers and commissioners could use the electronic platform to publish future requirements or issues they need resolved. Suppliers could also respond confidentially with their ideas and solutions.
- Central government departments and other public sector bodies should trial sector specific 'Meet the Commissioner' days or innovation open days with the appropriate departmental contacts in attendance. This would facilitate supplier engagement with the departmental contact/user rather than just procurement professionals, which would in turn foster more meaningful communication between the parties.

Theme 3: Collaboration

- To facilitate greater cross-departmental budgeting, the appointment of an individual (or individuals) within the public sector to identify cost-saving relationships between contract delivery elements governed by different departments is recommended. This would in turn help promote greater appreciation of innovative products and solutions which have the potential to save money across more than one department or public sector body.
- To encourage greater collaboration between suppliers and therefore increase their capability and capacity to supply innovative products and solutions, suppliers could be offered training aimed at helping them to identify, develop and manage successful collaborative partnerships.

Theme 4: Removing / Reducing / Managing Risk

- A number of recommendations have been put forward that could help the public sector encourage innovation without the threat of the following:
 - Challenge and litigation
 - Delaying contract commencement
 - Financial loss
 - Personal/professional risk

These recommendations include:

- A greater commitment by the public sector to provide more detailed feedback to suppliers on tender submissions, which may reduce the incidence of legal challenge.
- The introduction of an intermediate body which could be the first port of call if a supplier has a grievance regarding how a procurement event was managed. This could result in fewer cases going to full legal challenge.
- The introduction of an innovation fund which would be available to public sector organisations (outside of their individual budget allocation) who wish to consider or trial innovative products and services. This could help reduce the financial risk associated with trialling innovative products and services outside of a procurement environment.
- To work towards the development of a public sector which is equipped to manage risk in the procurement of innovation, buyers and commissioners could be offered training on the identification, reduction and mitigation of risk in the procurement process.

Theme 5: Changing Tender Practice

- The public sector should commit to greater use of outcome-based specifications. This would permit suppliers to submit tender responses which provide innovative solutions without being limited by restrictive tender specifications.
- The public sector should be more explicit in their Terms of Reference as to how total life costs have been considered when setting the weighting for cost. Suppliers would then have more confidence that this has been considered adequately.

Incentivising Innovation

- In parallel with the above recommendations the public sector should initiate an incentive programme for employees who actively encourage innovation through their procurement practices, particularly where the new solution demonstrably achieves greater value for money.

The implementation of these recommendations will require co-ordinated action across the public sector, and not just in Centres of Procurement Expertise. However all of the indications from this research study are that the public sector is committed to taking on the challenge of facilitating and stimulating innovation through public procurement.

Further Challenges

As indicated already, the Terms of Reference for this study focused on:

- a. A programme of research to examine this key question:
'To what extent does public procurement policy and practice in Northern Ireland encourage innovation';
and

- b. The proposal of recommendations for improvement.

A follow-up challenge now needs to be taken up in relation to:

- c. The prioritisation of those recommendations;
- d. The development of action plans for:
 - The implementation of recommendations; and
 - The identification of barriers and challenges to implementation, and the development of measures to overcome these barriers and challenges.

This work could be initiated by a cross-departmental working group, involving representatives from various procuring departments (e.g. commissioners), COPEs, the Public Service Reform Division of the Department of Finance & Personnel, and other relevant departments or groups.

1.0 AN INTRODUCTION TO THE RESEARCH STUDY

1.1 Context for This Study

Innovation is a key driver of productivity and economic growth. It can also make a major contribution to improving the quality and financial sustainability of public services. Consequently there is considerable and growing interest in policy approaches that stimulate and support innovation.

While attention has traditionally centred on supply-side policies that are aimed at supporting the private sector to generate innovation (eg Research & Development funding), the focus has recently turned to demand-side measures, including public procurement.

Given the large size (and purchasing value) of the public sector, there would appear to be potential to harness the public sector's purchasing power to stimulate, foster and help sustain innovation.

However it is unclear (as of late 2014) whether this is happening, in practice, in Northern Ireland.

In September 2014, the Northern Ireland Council for Voluntary Action (NICVA) commissioned Envision Management Consultants to:

- (i) Carry out a programme of research to examine this key question:
'To what extent does public procurement policy and practice in Northern Ireland encourage innovation';
and
- (ii) To make recommendations for improvement.

The research was carried out between mid-September 2014 and December 2014, and involved engaging with both Northern Ireland public sector organisations and the Northern Ireland supply base (private sector companies, and voluntary & community organisations).

1.2 The Research Methodology

1.2.1 The First Step – Exploring Expert Opinion on Fostering Innovation through Public Procurement in Northern Ireland.

Envision invited a group of experts to participate in a panel working session and facilitated discussion at the beginning of the research process. The panel members were invited to the discussion session, based on their experience and expertise in working in:

- The SME Sector
- Public Procurement Practice
- Innovation Policy in the Public Sector
- Public Procurement Policy
- Public Procurement Law



All directly relevant to the challenge, and the opportunity of fostering innovation through Public Procurement

This mix of experience complements NIVCA's expertise and experience of the voluntary and community sector, and builds on the consultations that NIVCA has undertaken with voluntary and community groups prior to the commissioning of this research study (consultations that were in fact a stimulus for this study).

Specifically, the expert panel involved the following key stakeholders:

Expert Panel Members		
Organisation	Name	
The Central Procurement Directorate	Michael Watson	As Centres of Procurement Excellence, CPD and BSO are directly focused on the challenges and opportunities involved in fostering innovation through public procurement.
Business Services Organisation - Procurement & Logistics Service	Peter Wilson	
Business Services Organisation - Small Business Research Initiative	Julie-Ann Augusto	
Social Enterprise Northern Ireland	Juliet Cornford	Social Enterprise Northern Ireland works with social enterprises in Northern Ireland, and has direct experience and feedback from these social enterprises on their experience of public funding allocation and public procurement, including the procurement of innovation.
Federation of Small Businesses	Carolyn Brown	FSB represents the interests of small businesses in Northern Ireland, and has direct experience and feedback from SME's on their experience of public procurement, including the procurement of innovation.
CBI Northern Ireland	David Fry	CBI represents the interests of business in Northern Ireland – from SME's to larger corporates. In this role, CBI has direct experience and feedback from companies on their experience of public procurement, including the procurement of innovation.
Public Service Reform Division – Department of Finance & Personnel	Christopher Farrington	DFP is strongly focused on the reform of the public sector – including innovation in the public sector. This includes all aspects of innovation – procurement of innovation, and innovative procurement, and Christopher Farrington is central to DFP's work in this area.
EverSheds	Peter Curran	Eversheds is a major commercial legal practice, with particular experience and expertise in the area of public procurement law. Peter Curran has a particular interest in the legal issues and challenges of fostering innovation through public procurement, and in innovative procurement practices.
NUI Maynooth	Emma McEvoy	Emma McEvoy is a reputed academic in Public Procurement Policy and Law - she has carried out significant research in public procurement legislation and has co-authored a social-enterprise orientated report entitled <i>How to Engage in the Public Sector Market</i> .

The panel discussions also involved:

- Martin McBride and Elaine Scullion of Envision – who jointly led and facilitated the discussion.
- Eoin Rooney (NICVA) who attended the panel discussion as an observer.

The panel working session and discussion drew on the panel members’ individual expertise to:

- (i) Define the issues and challenges involved in the ‘fostering of innovation’ through public procurement;
- (ii) Identify the issues that should be addressed in the research process – by including them in the research instruments, discussion guides, etc; and
- (iii) Identify other research and informed comment available on the fostering of innovation through public procurement.

The outcome of this opening panel discussion fed into the research process, and hence is integral to the findings reported in this document.

1.2.2 Overview of the Research Methodology

The research study involved five strands of activity, which fed into the development of clear recommendations. The five strands are briefly described below:

Methodology Overview	Description
<pre> graph TD A[Desk Research Published work on Fostering Innovation through PP] --> B[Buyer Interviews] B --> C[Supplier Survey (Private Sector and the Community & Voluntary Sector)] C --> D[Supplier Focus Group (Private Sector and the Community & Voluntary Sector)] D --> E[Supplier & Contract Case Studies] E --> F[Recommendations for Improvement] </pre>	<p>Drawing on published work on:</p> <ul style="list-style-type: none"> • Initiatives that encourage innovation (in the world of public procurement); • Procurement processes that encourage innovation; • Perceived barriers to procuring innovation in the public sector; • Best practice in encouraging innovation through public procurement. <p>A combination of interviews, survey-based consultation, and in-depth focus group discussions with public sector buyers, and the supplier base:</p> <ul style="list-style-type: none"> • To gather views and experiences of both the public sector and the supplier base on how well innovation is encouraged through public procurement. • To explore the barriers faced by both buyers and suppliers – in public procurement of innovation. • To gather opinion for how barriers might be overcome, and how the public sector might better foster innovation through procurement. • The development of individual supplier case studies providing an overview of their specific experiences of supplying innovative products and services into the public sector; and • The identification and documentation of public sector contract examples – in which innovation has been encouraged through public procurement. • The development of recommendations on how the Northern Ireland public sector can improve the approach to fostering innovation through public procurement.

1.2.3 Considering the Research Findings

Having developed draft recommendations, the expert panel was reconvened to:

- Debate and refine the recommendations; and
- Consider the initial practical challenges and implications of implementing the proposed recommendations.

The recommendations presented in this report have been presented to the expert panel for review and input.

1.3 Innovative Procurement or Procuring Innovation?

Before drawing the reader into the findings of this study, one point should be explicitly clarified – on the distinction between:

1. **Innovative procurement processes:** the procurement of products, services and supplies for the public sector in an innovative way; and
2. **The procurement of innovative products, services and solutions:** i.e. procuring products, services and solutions that are entirely new and innovative; or new and innovative in the public sector, and that effect real change, and possibly deliver cost savings, in the public sector.

This research study is focused on the latter i.e. **the procurement of innovative products, services and solutions;** and the potential for fostering and stimulating innovation through public procurement.

The focus is not on innovative procurement processes. However, it should be noted that discussions on the procurement of innovation (and the fostering of innovation through public procurement) have extended into the issue of innovative procurement processes – in so far as interview respondents have considered there to be some relationship between them.

These links (as commented on by some respondents) are reported on within the body of the report.

1.4 This Report

The remainder of this report:

- (i) Sets out the key themes emerging from the research study;
- (ii) Presents the findings of research evidence supporting each of these themes; and
- (iii) Proposes recommendations emerging from consultation with public sector buyers, and suppliers to the public sector (private sector businesses, social enterprises, and voluntary and community sector organisations).

This document is supported by a supplementary report - a more detailed exposition of all of the research study findings, specifically providing a detailed analysis of:

- a. The published research on how public procurement can be used to stimulate innovation;
- b. The results of one to one consultations with public sector buyers;
- c. A significant survey of, and focus group with, suppliers to the public sector - private sector businesses, social enterprises and voluntary and community organisations;

The more detailed supplementary report, is available for download from the NICVA web site:
<http://www.nicva.org/resource/public-procurement-innovation>

2.0 THEME 1: KNOWLEDGE AND SKILLS

All strands of the research have highlighted, in different ways, how increased knowledge and skills in the public sector are critical to fostering innovation through public procurement. Furthermore, the research confirms that a lack of the required knowledge and skills can act as a barrier to innovation.

The research has highlighted the following:

- A public sector with greater knowledge and understanding of the products and services available to it can help drive demand for innovation.
- A lack of sufficient public sector technical knowledge, market understanding and commercial skills can act as a barrier to innovation.
- A perceived lack of demand in the public sector market for innovative products and services (and this is perceived to be, in part, influenced by a relative lack of market knowledge on the part of commissioners and buyers).

This is supported through the various strands of research findings as follows:

2.1 Desk Research

Technical Expertise

One of the key barriers to innovation, as identified through a review of the published work on fostering innovation through public procurement, is a lack of public sector technical knowledge or market understanding.

In 2011, The Manchester Institute of Innovation research published a background paper *Procurement and Innovation: Underpinning the Debate*. The paper highlighted case study evidence showing that:

*'the lack of market and technical knowledge and the consequences for the lack of innovation are stronger than expected. The perceived lack of technical and market intelligence points towards the need for a general improvement of capabilities within the procurement process.'*¹

Commercial Skills

A lack of commercial skills in the public sector has also been recognised as a key barrier.

As reported in *Barriers to Innovation through Public Procurement – A Supplier Perspective*:

*"A shortage of commercial skills among procurers has been commonly found to limit engagement with the marketplace and the development of closer supply relations."*²

Another barrier related to this is a lack of pre-procurement market engagement which is dealt with in more detail in the following section under the theme of Communication.

Encouraging Developments– The UK Crown Commercial Service

There are, however, encouraging developments within the UK Government with regards to using public procurement to drive innovation through increased knowledge and understanding. The Crown Commercial Service (CCS) is an executive agency of the UK Cabinet Office and is the new commercial and procurement function of the UK Government. It is responsible for procurement policy and provides expert commercial services and advice.³

The CCS brings together:

- The commercial function of the Cabinet Office, including Government Procurement Policy.
- The Government Procurement Service (GPS).

The new organisation offers a fully managed, end-to-end commercial procurement service and an expert commercial advisory service.

While the CCS activities do not directly drive innovation through public procurement, they do support some of the themes, detailed in this report, which encourage innovation in public procurement.

¹ Edler, J et al (2011) *Procurement and Innovation: Underpinning the Debate*.

² Uyarra, E et al (2014). *Barriers to Innovation through Public Procurement: A Supplier Perspective*.

³ Crown Commercial Services (2014) *Compliance with European Union Laws and Regulation*.

The CCS focuses on some small but effective ways to change how public sector organisations approach procurement and the delivery of their contracts. In what is called **The New DNA for Commercial Activities** the CCS suggests that public procurement needs to concentrate more of its attention on:

- Engaging with the supplier before the formal procurement process (increasing market knowledge); and
- The management of contract delivery after the formal procurement process.

Presently in public procurement the majority of the effort is expended during the procurement process.

In line with a more commercial focus to public procurement and the commitment to building commercial skills within the public sector, the CCS is offering commercial training to public sector staff to include:

- Developing commercial awareness;
- Effective commercial planning; and,
- Contracting and achieving supplier engagement.⁴

A greater focus on pre-procurement market engagement and a public sector with a solid commercial skills base are critical to encouraging innovation through public procurement, and the CCS approach provides an excellent example of best practice. This effort will also result in driving up demand for innovation in the public sector.

Greater Market Knowledge - Best Practice Examples

Crucially all the best practice examples explored through the research, of both encouraging innovation in general and encouraging innovation through public procurement, have a central theme of increased market knowledge. For example:

- G-cloud UK provides a platform for buyers to engage with suppliers to gain a greater understanding of what is available in the market.
- The zero waste mattress solution adopted by the UK Prison Service, through Forward Commitment Procurement, involved consultation with the market in advance of the procurement process.
- The procurement of the robotic bed washing facility for the Erasmus University Medical Centre in Rotterdam was preceded by a series of market soundings and competitive dialogue with suppliers to increase the buyers' market knowledge.

These and other best practice examples are presented in detail in the supplementary report which is available for download from the NICVA website: <http://www.nicva.org/resource/public-procurement-innovation>

2.2 Buyer Research

As part of the research a total of 14 public sector buyers were interviewed from the Central Procurement Directorate, Centres of Procurement Expertise and Local Authorities.

Lack of Demand for Innovation

When asked if procuring innovation was a priority, the majority of buyers interviewed said it was not a priority. However, buyers did report activity in their procurement practices which encourage innovation. One such activity is pre-procurement market engagement which in turn would increase knowledge and understanding of the market.

Increasing Market Knowledge

The majority of buyers interviewed did report using pre-procurement market engagement for some contracts in order to get a better understanding of the market. Those who reported that they did not use this process provided the following reasons:

- *"For construction projects the building is either designed before the tender is published or an outline design is provided giving the supplier scope to provide innovative solutions to meet that, therefore there isn't always the need for prior market engagement."*
- *"As an intelligent purchaser we know what we want before we go to the market for it."*
- *"Not formally but we do listen to suppliers who approach us with new products."*

While the majority of buyers have used pre-procurement market engagement in the past it is clear that this has been only on specific contracts. There is clear scope for more use of pre-procurement market engagement to encourage the procurement of innovative products and service across all buyers interviewed.

⁴Crown Commercial Services (2014) Buying and Managing Government Goods and Services more Efficiently and Effectively

Barriers to Innovation

When asked about specific barriers to innovation, in relation to knowledge and skills the buyers reported:

- *“There is lack of buy-in at the commissioner level to try something new.”*
- *“Not enough engagement with suppliers in advance of a procurement event.”*
- *“In general the public sector aren’t innovative thinkers.”*

These barriers can all be related to a lack of knowledge and skills. A lack of understanding of what is available in the market, may give rise to a lack of buy-in at commissioner level and therefore a lack of demand for innovation.

When buyers were asked to provide suggestions as to how these barriers might be overcome, they suggested the following:

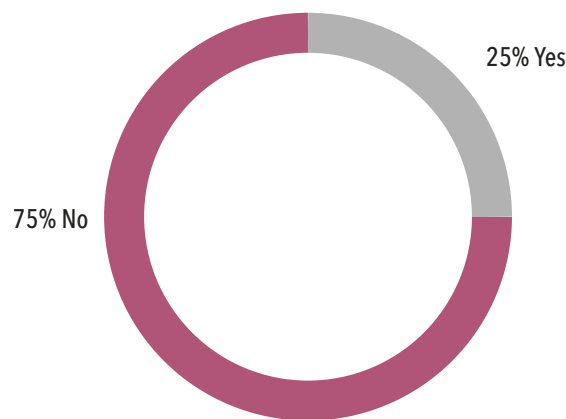
- *Communication between buyers and suppliers in advance of a procurement process.*
- *Better informed commissioners.*
- *Category managers with specific market knowledge.*
- *Buyer knowledge and understanding of the procurement processes available.*
- *Public sector organisations open to change.*

There is a clear desire amongst the buyers interviewed to introduce measures which will increase market understanding and technical knowledge in order to better identify and procure innovative products and services.

2.3 Supplier Research

Suppliers were asked if they had experience of a Northern Ireland public sector body engaging with the market in advance of a procurement process (pre-procurement market engagement). The following graphic presents their response:

Experience of Pre-procurement Market Engagement
(Total No. of respondents: 242)



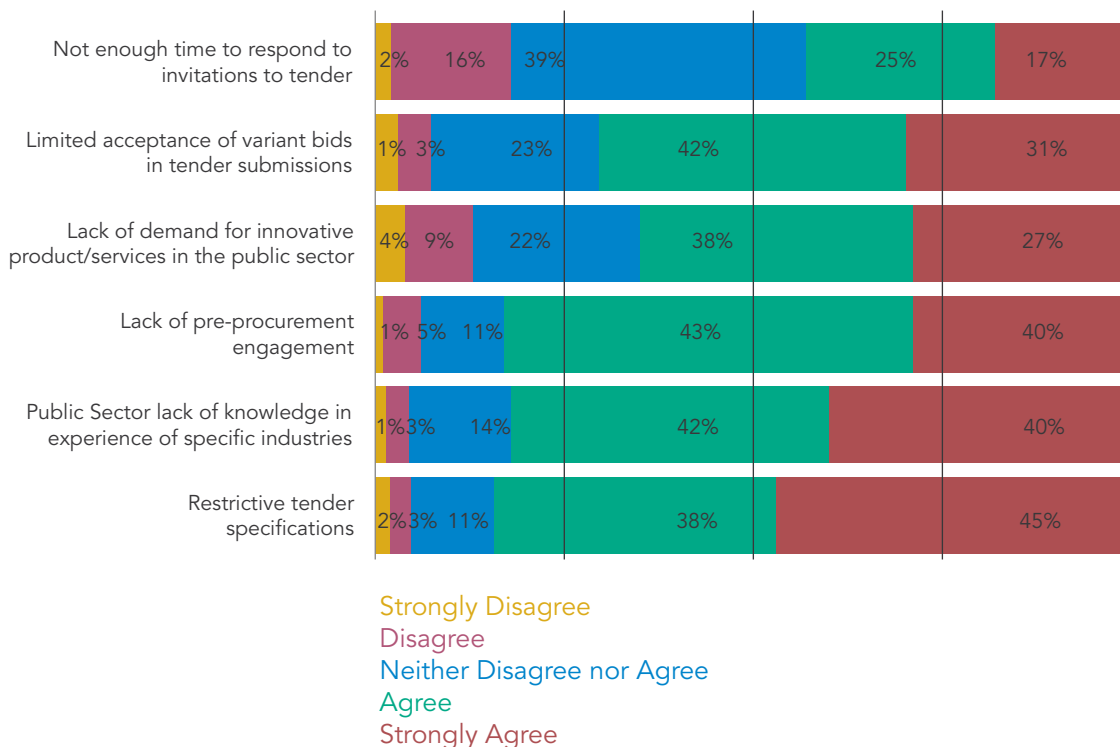
The majority (75%) of supplier respondents reported that they had no experience of pre-procurement market engagement. Of those who had experience of pre-procurement market engagement 76% reported that it was a very successful process because it provided the supplier with the opportunity to:

- *Ask questions and gather information on the buyer requirements.*
- *Present their products and services to the public sector.*

When asked about barriers they faced when trying to supply innovative products and services to the public sector in Northern Ireland respondents were asked:

To what extent do you agree / disagree that the following are barriers to supplying innovative products and services to the public sector?

(Total No. of respondents: 256)



The majority (82%) of supplier respondents agreed or strongly agreed that public sector lack of knowledge and experience of specific industries was a barrier to supplying innovative products and services.

Furthermore, a total of 83% of respondents agreed or strongly agreed that lack of pre-procurement market engagement was a barrier to supplying innovative products and services to the public sector.

The supplier focus group also identified a lack of market knowledge and understanding as a barrier to innovation:

- *“In relation to the voluntary sector, my perception would be there is a lack of knowledge and understanding on both sides. So on the public sector side there may be a lack of understanding about what the community and voluntary sector is and what it can do. Then a lack of understanding from our sector about what procurement is all about.”* **Belfast Central Mission**
- *“The civil service has a high staff turnover so someone who may understand what your product or service is about has moved on and you’re having to explain all of that again and you are presented with the same questions.”* **Advice NI**

The focus group also identified a need for skills development in the public sector:

- *“There is a requirement for training in the public sector in relation to innovation and encouraging innovation. Perhaps some consultancy support for the commissioners to help them think differently.”* **Advice NI**

The majority of supplier survey respondents and all focus group participants indicated that they would be interested in participating in an initiative to engage with the public sector to demonstrate their products and services. When they were asked why they would be interested in this they gave the following reasons:

- It would provide them with the opportunity to show their products and services to the public sector.
- It would give them insight into the public sector pipeline and how their projects and services might meet their requirements.

A lack of public sector knowledge and understanding of specific markets is clearly a barrier to innovation. Market research and pre-procurement market engagement with suppliers is key to increasing this knowledge in advance of a procurement process.

3.0 THEME 2: COMMUNICATION

Communication is a consistent theme running through the research. In relation to procuring innovation, this theme has two main sub headings:

1. Communication between commissioners and buyers within the public sector in advance of a procurement process.
2. Communication between commissioner/buyer and suppliers in advance of a procurement process to gain an understanding of what the market has to offer.

The research has highlighted the following:

- There is evidence of pre-procurement market engagement practices in the Northern Ireland public sector market; however, this is only for specific contracts and these could be used more extensively.
- There is a lack of communication between commissioners and buyers within the public sector market which is restricting the procurement of innovative products and services.

This is supported through the various strands of research findings as follows:

3.1 Desk Research

Buyer-Supplier Communication

In 2009 The Office of Government Commerce published a report Driving Innovation through Public Procurement. The report highlights the importance of early consideration of innovation in the procurement process:

“Once a contract has been let, the scope to accommodate innovation within the contract is governed by the contract itself and the nature of contractual relationship; the potential is greatest if innovation has been considered when the procurement is being planned.”⁵

One way of considering innovation in the early stages of the procurement process or indeed before the process begins is through pre-market engagement with suppliers.

A lack of pre-procurement market engagement has featured as a barrier for UK suppliers offering innovative products and services to the public sector over the last number of years. As reported in *Barriers to Innovation through Public Procurement – A Suppliers Perspective* this is still a concern. A total of 46% of the 800 organisations who participated in that survey felt that a lack of interaction with procuring organisations was a very significant barrier to innovation and a further 33% felt that it was moderately significant.

Buyer-Supplier Communication - Best Practice Examples

Crucially, and in line with the previous theme, all the best practice examples explored through the research, of both encouraging innovation in general and encouraging innovation through public procurement have a central theme of communication between buyers and suppliers. For example:

- G-cloud UK involves communication between industry and the public sector.
- The zero waste mattress solution adopted by the UK Prison Service, through forward commitment procurement, involved consultation with the market in advance of the procurement process.
- The procurement of the robotic bed washing facility for the Erasmus University Medical Centre in Rotterdam, was preceded by a series of market soundings and competitive dialogue with suppliers.

These and other best practice examples are presented in detail in the supplementary report which is available for download from the NICVA web site:
<http://www.nicva.org/resource/public-procurement-innovation>

⁵The Office of Government Commerce (2009) Driving Innovation Through Public Procurement.

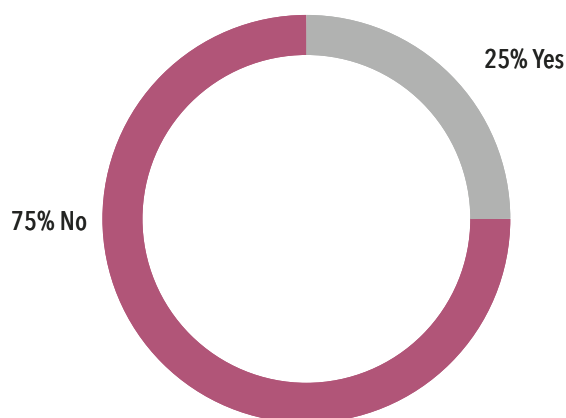
3.2 Buyer and Supplier Research

Buyer-Supplier Communication

The buyer interview findings did highlight that the majority of buyers have used pre-procurement market engagement in the past and found this successful. However, this is only for certain contracts and is not widespread.

One of the barriers to procuring innovation as reported by some of the buyers was the insufficient use of pre-market engagement processes. This is echoed in the supplier research findings. Suppliers were asked if they had experience of a Northern Ireland public sector body engaging with the market in advance of a procurement process (pre-procurement market engagement). The following graphic presents their response:

Experience of Pre-procurement Market Engagement
(Total No. of respondents: 242)



The majority (75%) of supplier respondents reported that they had no experience of pre-procurement market engagement. Of those who had experience of pre-procurement market engagement 76% reported that it was a very successful process because:

- It provided the supplier an opportunity to ask questions and gather information on the buyer requirements.
- It provided the supplier with the opportunity to present their products and services to the public sector.

There is a direct correlation between respondent tender success rate and experience of pre-procurement market engagement. A total of 49% of respondent organisations with a success rate of more than 41% (in the last 12 months) had experience of pre-procurement market engagement. A total of 22% of organisations with a tender success rate of 1-40% had experience and only 13% of organisations with a 0% success rate had experience of pre-market engagement.

This is an important finding as it highlights that participation in pre-market engagement initiatives can have a positive impact on an organisation’s tender success rate.

When asked about barriers they faced when trying to supply innovative products and services to the public sector in Northern Ireland respondents were asked:

To what extent do you agree / disagree that the following are barriers to supplying innovative products and services to the public sector?

A total of 83% of respondents agreed or strongly agreed that lack of pre-procurement market engagement was a barrier to supplying innovative products and services to the public sector.

While the supplier survey findings highlighted a perception that there is insufficient pre-procurement market engagement in the Northern Ireland public sector market, the supplier focus group discussions also indicated that there is a lack of appropriate pre-procurement buyer engagement.

One participant explained her experience of a meet the buyer event which was too general:

“I went to a meet the buyer event and they have a lot of stands for public sector departments, and it allows you to take your product to them and gives you a chance to get past the gatekeepers, but it stopped there for us. The contact I spoke to there had absolutely nothing to do with traffic management. She did forward the email on and I think it eventually got to the store manager but it never got to the right contact.” Viewbrite

When suppliers were asked about initiatives which would help foster innovation through public procurement communication was again a common theme with suppliers stating that any initiative should include:

- Meet the Buyer events with appropriate contacts.
- Innovation events involving innovators, suppliers and buyers.
- Early and better communication between supplier and buyer.
- Publishing procurement pipelines.
- Buyers visiting supplier sites.
- Co-production of specifications.
- Opportunities to show products and services.
- Allow creative pitches before procurement.

In addition to this some of the focus group participants offered more structured suggestions:

A Sector Specific Meet the Buyer Event

*“The general meet the buyer doesn’t work. It needs to be targeted at specific sectors but also the public sector attendees need to be the end user rather than a general contact.” **Viewbrite***

True Engagement with the Supplier Base

*“In England and Wales the probation service is being privatised. As a supplier we have been engaging in networking events with them. The whole point of privatising probation is to bring together the incumbent public provider of the probation services, the private companies who believe they can deliver efficiencies to the service and the charities who naturally support the service, to ensure the new service is more joined up and hopefully more effective and more cost efficient.” **Core Systems***

E-Platform for Innovation

*“Perhaps the development of an e-platform or website to match suppliers and their new products and services with public sector need. They could upload an explanation of what they provide and the public sector could access this to see what is on offer.” **Advice NI***

Commissioner – Buyer Communication

When asked about other barriers to innovation, a small number of buyers interviewed reported that a lack of buy-in from commissioners to try something new was a key barrier.

In support of this view, when they were asked to identify key enablers to innovation, they reported:

- Communication between buyers and suppliers in advance of a procurement process.
- Better informed commissioners.
- Category managers with specific market knowledge.

These enablers all embrace communication between commissioner and buyer in advance of the procurement process.

3.3 Supplier Case Studies

One of the supplier case studies provides a perfect example of where pre-procurement market engagement and communication has been instrumental in the procurement of an innovative product.

PlotBox is a County Antrim based firm which has developed a scalable and cost-effective cloud platform which simplifies the control of cemeteries and crematoria. The company was established in February 2011.

The software is designed for cemeteries and crematoria – therefore the company’s key customers in Northern Ireland are local councils. Since the software solution is relatively new, councils were not aware of it or of the benefits it could bring to the operation of their cemeteries. There would therefore not have been a specific budget allocated to it.

The company approached Ballymena Borough Council with their new software solution and the council allowed the company to deliver a pilot mapping project on one of the council’s cemeteries. This proved successful, and the company has since been successful in another project with Newtownabbey Borough Council.

Communication between buyer and supplier was critical to the successful outcome of this process.

Communication is critical to fostering innovation through public procurement. There is evidence of some pre-procurement market engagement activity in the Northern Ireland public sector market but only for a small number of contracts. With regards to more general engagement events such as Meet the Buyer events, there is a requirement for more sector specific tailoring for these to be more beneficial.

These case studies are presented in detail in the supplementary report which is available for download from the NICVA web site: <http://www.nicva.org/resource/public-procurement-innovation>

4.0 THEME 3: COLLABORATION

A theme which is also prevalent in relation to successfully procuring innovation is collaboration. This theme has two main sub headings:

1. Collaboration between the public sector and industry in advance of a procurement process.
2. Collaboration within the public sector in relation to cross-departmental budgeting.

The research has highlighted the following:

- Successful examples of where innovation has been fostered in general or through public procurement have involved some element of collaboration.
- There is a perceived lack of cross-departmental budgeting to facilitate cost savings with the result that innovative products and services which might impact more than one department/government body may be overlooked.

This is supported through the various strands of research findings as follows:

4.1 Desk Research

Fostering Innovation Through Collaboration – Northern Ireland

The desk research identified a number of strong initiatives in the Northern Ireland market which are fostering innovation through collaboration between the public sector, academia and industry. Below are just a few examples:

Small Business Research Initiative (SBRI)

The SBRI programme is a two stage pre-commercial procurement scheme championed by the Technology Strategy Board. It is aimed at procuring the development of products and services to address problems or help to achieve required policy outcomes where appropriate solutions are not available currently in the market.

The key benefits are that SBRI provides a risk-managed environment for the public sector to incentivise the development of products and services to meet policy and service priorities. At the same time it enables and provides funding to businesses, and in particular SMEs to research and develop their ideas and to identify potential new applications and market opportunities for the technologies they are developing.

The Department of Finance and Personnel - Public Sector Reform Division

The Public Sector Reform Division's aim is to provide support to Northern Ireland departments in the implementation of reform across the public sector and to encourage innovation in service delivery by identifying and sharing best practice. The specific objectives of the division are to:

- Explore opportunities and disseminate best practice reform lessons across NI Executive departments, arm's-length bodies and local authorities.
- Develop and implement innovative solutions that generate more efficient and effective outcomes in NI executive departments, arm's-length bodies and the local authorities.
- Work co-operatively with departments to support and enable the improvement of services for our citizens.
- Manage, monitor and report on the implementation of public sector reform.⁶

One aspect of the division's work is the establishment of an Innovation Lab for the Northern Ireland public sector.

The Innovation Lab differs from traditional ways of problem solving. It involves up-front research followed by a concentrated session - over a number of consecutive days - when carefully selected individuals focus their collective experience and energy on developing and working towards an agreed solution.

This methodology has the potential to deliver higher quality solutions over a short time period, and at less cost than alternative methods. The Innovation Lab has just started its programme of work and has looked at the issues of regulatory impact assessments, procurement, and reward and recognition.

⁶ The Department of Finance and Personnel (2014) *Strategic Policy & Reform Directorate*.

Northern Ireland Connected Health Innovation Centre

The Connected Health Innovation Centre (CHIC) is focused on business-led research in the area of connected health. CHIC seeks to lead transformational research which aligns care needs with technology providers, researchers and clinical experience.

CHIC targets research in areas such as e-Health, digital health, tele-health, tele-monitoring, disease management, and home-based care. Key focuses for the research are Vital Signs Sensing Development, Integrated Care, Assisted Living and Point of Care Diagnostics. The centre is based at the University of Ulster and builds on advanced engineering capability in sensors, tissue engineering, advanced materials, advanced computing, and other Smart technology applications. These technologies are being focused on areas such as rehabilitation, enablement and self-management.

There are also a number of other health-related research centres in Northern Ireland connected with both the University of Ulster and Queen's University which are encouraging innovation through research collaboration with industry.

Fostering Innovation through Collaboration – Best Practice

The research also identified a number of best practice examples outside Northern Ireland where innovation has been successfully encouraged. These are summarised below:

UK Police Innovation Fund

Police Innovation Fund is an annual initiative designed to encourage the 43 police forces operating across England and Wales to embrace new technology and ways of working. The fund provides Police and Crime Commissioners with the opportunity to submit bids on initiatives that will promote collaboration with other forces, emergency services, criminal justice agencies and local government bodies to improve their use of digital working and technology in order to deliver sustainable improvements and efficiencies in the way their police force operates in future.

The fund encourages collaboration between police forces and also between the public sector and its supplier base.

Horizon 2020

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.

By coupling research and innovation, Horizon 2020 is helping to achieve this with its emphasis on excellent science, industrial leadership and tackling societal challenges. The goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation.

Barcelona Urban Lab

Urban Lab is an initiative that facilitates the use of public spaces in the city of Barcelona to carry out tests and pilot programs on products and services with an urban impact. The products are in the pre-market stage and are in line with the Barcelona City Council's aims, priorities and action plans.

The pilot programs must meet the Barcelona City Council's real needs and must have a direct impact on the functioning of the city or on the services provided by the City Council itself, benefiting residents.

The initiative involves public sector collaboration with suppliers.

Fostering Innovation through Collaboration – Procurement Best Practice

There are also a number of best practice examples in the procurement of innovation which embrace the theme of collaboration between the public sector and suppliers. These are summarised as follows:

G-Cloud UK

The G-Cloud framework agreement(s) allows public sector customers to buy pay-as-you-go commoditised cloud based solutions through an agreement that is compliant, regulated and refreshed. There are over 16,000 up-to-date innovative cloud solutions available across two iterations of the framework. These services are split into four lots. There are over 1,500 suppliers (88% of these are SMEs) offering these services through G-Cloud.

One example of the success of the framework is with East Hampshire District Council and Havant Borough Council who had staff based across two council areas. They were keen to deploy a shared collaborative extranet resource, initially for the extended management and business improvement teams of project and IT professionals. The extranet provided a private virtual space where the two councils could securely collaborate, share information and integrate operations.

The framework allows government departments to have access to innovative solutions without the need for lengthy and costly procurement processes and expensive long term contracts.

Zero Waste Mattress Solution for UK Prisons

Historically, the majority of waste mattresses and pillows from Her Majesty's Prison Service (HMPS) were sent to landfill or incinerated as clinical waste. The increasing costs of disposal together with a drive to reduce volumes of waste to landfill driven by the SOGE (Sustainable Operations on the Government Estate) targets brought this problem into focus. HMPS worked with the DTI/DEFRA Environmental Innovations Advisory Group and OGC in the first Forward Commitment Procurement (FCP) demonstration project to deliver an innovative solution to this problem.

In line with the principles of Forward Commitment Procurement, HMPS identified their unmet need and consulted with the market to find a way to deliver their requirement in a cost effective way. This led to a fundamental shift in the procurement approach and, after trials, the procurement in March 2009 of a fully managed zero waste mattress system.

Market consultation was used to gain a greater understanding of what the market had to offer.

Trials / pilots were conducted to test the solutions.

Erasmus University Medical Centre, Rotterdam

Erasmus University Medical Center initiated the procurement of a 'Robotic Bedwashing Facility'. In this procurement the Erasmus University Medical Center asked the market to design a more cost efficient solution to disinfect the hospital's 70,000 beds and mattresses, which also used less energy and water.

Erasmus University Medical Center used the Forward Commitment Procurement principles that included a series of market soundings that stimulated cross supply chain interaction, a competitive dialogue and outcome-based requirements.

The contract was won by IMS Medical (<http://www.imsmedical.nl>). This company offered a robotic solution that included high-precision cleaning robots from the automotive industry. The cost per bed was 35% lower than the existing solution and the CO2 footprint was lowered by 65%. Furthermore, the cleaning quality was more consistent.

Market consultation was critical to the success of this procurement event.

Outcome-based specifications were used to encourage innovation.

All the above examples involve pre-procurement market engagement to identify new and innovative products and solutions and also involve a form of collaboration between the public sector and suppliers as part of the process.

These and other best practice examples are presented in detail in the supplementary report which is available for download from the NICVA web site: <http://www.nicva.org/resource/public-procurement-innovation>

4.2 Supplier Research

Cross-departmental Budgetary Collaboration

The supplier research findings also identified the theme of collaboration as a critical aspect of procuring innovative products and solutions successfully.

When asked to suggest initiatives which would encourage innovation through public procurement one of the suggestions by survey respondents was cross-departmental consideration of where a purchase in one government department could generate cost savings in another department.

The supplier focus group discussions also highlighted this in terms of the recognition of how preventative activities in the social sector can impact on the care required from the health sector:

"We are dealing with 1300 people a month in terms of helping them with debt problems. The support we provide can have wider positive outcomes for these people over a six month to a year period. For example we may refer them for mental health support, self - help groups and even to the point of preventing suicide in some cases. But this is not recognised in the support we provide. I would like to see more correlation between the departments thinking on that. If they are going to be really innovative in the social sector when procuring services they need to consider the potential knock on effects to health." **Advice NI**

"Particularly in the Community and Voluntary sector cross-departmental communication is important. For example of there is a housing need and the housing executive wants to address this, but there is also a fuel poverty need and a welfare need the solution could integrate all three to be more innovative and cost effective." **Advice NI**

Collaboration between the public sector and suppliers in the development and procurement of innovative products and services is critical to the introduction of innovation into the Northern Ireland public sector. This coupled with cross-departmental collaboration, from a budgetary perspective, will ensure that innovative products and solutions are used to deliver more cost-effective services.

5.0 THEME 4: RISK

Risk is a common theme when considering the procurement or adoption of relatively new innovative products and services. The theme of risk has also been highlighted throughout this research. This theme has a number of sub headings:

1. The risk of legal challenge and litigation from a supplier.
2. The risk of financial loss, if an innovative product or service proves unsuccessful.
3. The risk of delaying contract commencement by trialling or piloting new solutions.
4. Personal and professional risk, if an innovative product or service proves unsuccessful.

The research has highlighted the following:

- There is evidence that the Northern Ireland public sector are risk averse and therefore tend to select more restrictive forms of tender processes, which in turn can restrict innovation.
- There is a claim culture in Northern Ireland which fuels this risk aversion in the public sector.

This is supported through the various strands of research findings as follows:

5.1 Desk Research

Public Sector Risk Aversion

The Northern Ireland innovation strategy Innovate NI recognises this risk aversion within the public sector and that a more balanced approach to risk taking and regulation is required:

“Risk aversion rather than risk management is one of the greatest threats to innovation. One key sign that the NI public sector is embracing innovation would be by addressing the perception that ‘trying to avoid risk by doing nothing’ is better than ‘trying to do the right thing and failing.’”⁷

In response, the strategy aims to:

“Explore new portfolio models to support innovation and to manage higher levels of risk in return for higher returns to the economy.”⁸

While the strategy does not offer any specific information on what these new portfolio models might be, the recognition that risk aversion is a key barrier to driving innovation through public procurement is encouraging. This focus on the mitigation of risk is supported by findings from **all** aspects of this research study.

Risk aversion as a barrier to innovation is also prevalent in the wider UK market. A 2004 publication from the Office of Government Commerce, *Capturing Innovation*, reports that in the UK public sector market:

“There is a tendency to opt for low-risk solutions, low margin players and mature technology.”⁹

A later report (2009) from The Office of Government Commerce *Driving Innovation through Public Procurement* states that:

“The public sector may seek to stimulate supplier innovation through short terms pilot projects but often does not carry through ideas into longer term procurement. Innovation is not consistently welcomed or rewarded.”¹⁰

In a 2005 publication by the Franholdner Institute for Systems and Innovation Research in Germany, an examination of individual procurement events (case studies) across a number of countries showed that:

“It is necessary to think about risk management to deal with the uncertainty involved in buying innovative products and services.”¹¹

This sentiment is echoed in a recent Department of Enterprise, Trade & Employment (Ireland) publication *Buying Innovation – The 10 Step Guide*:

“Innovation can involve a higher degree of risk, but the right response to this is for public procurers to become better at assessing and managing risk, not avoiding it.”¹²

Poor management of risk is still a barrier in 2014 as reported in a Manchester Institute of Innovation Research report *Barriers to Innovation through Public Procurement – A Suppliers Perspective*. In a 2011 survey of 800 UK suppliers 33% reported that poor management of risk by the public sector was a very significant barrier to innovation and a further 39% reported that it was a moderately significant barrier.

⁷ The Northern Ireland Executive (2014) *Innovative NI - Innovation Strategy for Northern Ireland 2014-2025*.

⁸ The Northern Ireland Executive (2014) *Innovative NI - Innovation Strategy for Northern Ireland 2014-2025*.

⁹ The Office of Government Commerce (2004) *Capturing Innovation*.

¹⁰ The Office of Government Commerce (2009) *Driving Innovation Through Public Procurement*.

¹¹ Edler, J et al (2005) *Innovation and Public Procurement - A Review of Issues at Stake*.

¹² Department of Enterprise Trade and Employment (2010) *Buying Innovation - The 10 Step Guide*.

5.2 Buyer Research

Public Sector Risk Aversion and the Northern Ireland Claim Culture

The buyer research also supports this finding. The buyers interviewed highlighted the risk associated with:

- The use of variant bids,
- The claim culture which exists in Northern Ireland.

Variant Bids

A variant bid is where bidders have proposed an alternative solution to that set out by the public body. The buyers interviewed were asked if they include the acceptance of variant bids in contract terms of reference to encourage innovative alternative approaches and solutions.

The majority of buyers interviewed reported that they did not include the acceptance of variant bids for a range of reasons. One reason being that it wasn't always appropriate for the type of contracts they were letting but another reason provided was that variant bids are more difficult to evaluate. One buyer reported:

"Evaluating a variant bid is more difficult and can leave a public sector body open to challenge. You have two bids which meet the requirement in very different ways – difficult to decide which to go for."

Similarly, those who reported that they had accepted variant bids in the past were asked if they had experienced any challenges during the processes, their responses are summarised below:

- *"A variant bid is much more difficult to evaluate and can leave us open to challenge."*
- *"Introducing change can be difficult in an organisation."*
- *"The time required to assess a variant bid can be an issue."*
- *"Evaluating innovation can bring about issues of subjectivity that can lead to challenges from suppliers."*

While the acceptance of variant bids can encourage suppliers to offer more innovative products and services, the findings indicate that the majority of buyers interviewed do not accept variant bids for a range of reasons. In most cases this is due to variant bids being more difficult to evaluate, therefore leaving the public sector organisation open to legal challenge.

Barriers to Innovation

The buyers interviewed were asked to identify the key barriers they experienced when trying to procure innovative products and services. A number of their responses relate to risk:

- *"In the public sector there is a lack of courage to push the boundaries for fear of recriminations from higher up the chain."*
- *"Innovation is very difficult to evaluate, leaving the public sector open to legal challenge."*
- *"The claim culture in Northern Ireland is a key barrier. Suppliers often submit a legal challenge if they are unsuccessful."*
- *"Organisation culture can be a barrier in general – resistant to change."*

The buyers interviewed were also asked about the procurement processes available to them to procure innovative products and services. The majority of buyers did feel that the following procurement processes facilitated the procurement of innovation:

- Negotiated procedure
- Competitive dialogue

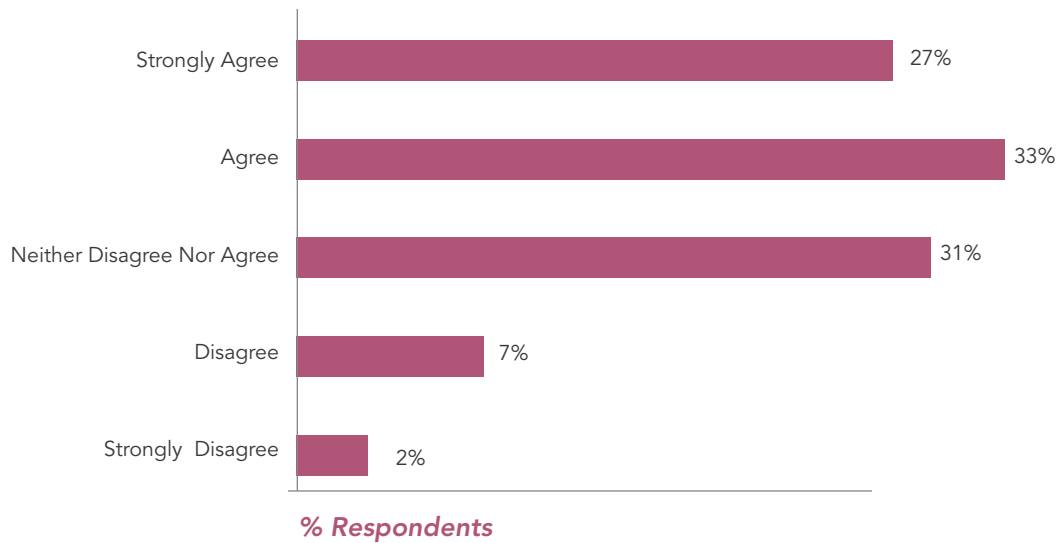
However, these processes are used only for the larger contracts as they can be costly and take longer than standard procurement processes therefore delaying the commencement of a contract. They also stated that these procurement processes, due to their more flexible structure, can leave them open to legal challenge by suppliers.

5.3 Supplier Research

Public Sector Risk Aversion

The suppliers who responded to the online survey were asked:

*To what extent do you agree or disagree that the public sector does not encourage innovation through procurement because of the risk of legal challenge from suppliers?
(Total No. of respondents: 252)*



The majority (60%) of respondents agreed or strongly agreed that the public sector does not encourage innovation because of the risk of legal challenge from suppliers.

When asked about initiatives and ideas that would help foster innovation through public procurement suppliers suggested two things which might help to overcome risk aversion within the public sector:

- A public sector better able to manage risk.
- An innovation fund which would allow public sector bodies and departments to access funding for procuring innovation.

The supplier focus group also identified risk aversion as a key barrier to innovation:

"Innovation usually means risk. They (public sector) don't want to take any risks. No one is going to stick their neck out and take a chance and with innovation you have to accept that you won't get it right all the time but it is still worth having a go." **Inphoactive**

The focus group discussion identified a similar recommendation for helping to overcome this aversion to risk.

"An innovation fund is a good idea to fund the procurement of innovative products and services." **Inphoactive**

Both buyers and suppliers who took part in this study recognise that risk is a major barrier when procuring innovative products and services. Mitigating against this risk will therefore be critical to the Northern Ireland public sector procuring more innovation.

6.0 THEME 5: TENDER PRACTICE

All the themes which have emerged from the research are interlinked, but none so much as risk and tender practice.

The research has highlighted the following:

- There are tender processes available to the Northern Ireland public sector to permit the procurement of innovative products and services but these are used infrequently and typically only for larger contracts. These processes are costly and take longer than standard tender processes and due to their flexibility can invite legal challenge from suppliers.
- As a result the public sector tends to favour more structured tender processes with restrictive tender specifications. This is a key barrier experienced by suppliers when supplying innovative products and services to the public sector.
- The majority of public sector buyers interviewed reported that they consider total life costs when setting the weighting for cost in the selection criteria while suppliers reported an inadequate consideration of total life costs by the public sector.

This is supported through the various strands of research findings as follows:

6.1 Desk Research

Tender Processes which Foster Innovation

There are a number of procurement processes available to the Northern Ireland public sector, under the EU Procurement Directive, which can facilitate the procurement of innovative products and services.

Competitive Dialogue

The **Competitive Dialogue Procedure**¹³ is a flexible procedure, suitable for complex projects where there is a need for authorities to discuss aspects of the proposed contract with candidates. Under competitive dialogue, a similar pre-selection procedure is undertaken to that used for the restricted procedure. However, shortlisted parties are **then** invited to participate in a dialogue process, which may have several stages.

This helps to refine the requirement through supplier input and gives the opportunity for meaningful negotiations. Once this stage is concluded, suppliers are invited to submit a final tender. There is only one provision for the contracting authority to ask bidders to “clarify, specify and fine-tune” their final bids before a preferred bidder is chosen.

While there are examples of these procurement processes being used by Northern Ireland central and local government organisations, it is exclusively for larger value, more complex projects as these processes can be both time intensive and costly. For example, in the last 12 months the Central Procurement Directorate has published 7 Competitive Dialogues and 72 Negotiated Procedures. If we consider that in 2012-13 CPD awarded 2,966 contracts it is apparent that the procedures are not in widespread use (in terms of the proportion of all contract awards).

Forward Commitment Procurement

Forward Commitment Procurement provides the supply chain with information on specific unmet needs and, critically, with the incentive of a Forward Commitment: a commitment to purchase a product or service that currently may not exist, at a specified future date, providing it can be delivered to agreed performance levels and costs. FCP provides the incentive, confidence and momentum for suppliers to invest and deliver innovative solutions.

¹³ European Commission (2014) *Practical Guide to Contract Procedures*.

There are three key steps involved in Forward Commitment Procurement and these are summarised below:

Identification	<ul style="list-style-type: none"> • Recognise problem / unmet needs. • Define an outcome-based requirement. • Prepare an FCP project outline business case. • Project approval and sign off.
Market Engagement	<ul style="list-style-type: none"> • Market sounding. • Market sounding review and analysis. • Supply chain feedback. • Market consultation. • Market consultation report.
Procurement	<ul style="list-style-type: none"> • Develop a pro-innovation procurement strategy. • Feedback to the supply chain and stakeholders. • Implement procurement strategy. • Negotiate procurement contract.

There are no examples of this process being used in Northern Ireland and only a few examples in the UK as whole. There are no documented reasons for the apparent underuse of this process in Northern Ireland but it may mirror the factors noted above regarding other procedures – the length of the process and cost (in comparison with traditional procurement processes).

The small number of examples of Forward Commitment Procurement in the UK market has been successful in purchasing innovative solutions to solve public sector problems. Some of these are detailed in section 4.0.

Pre-Commercial Procurement

Public procurement of innovation occurs when public authorities act as a **launch-customer** for innovative goods or services. These are typically not yet available on a large-scale commercial basis and may include conformance testing.

Pre-commercial procurement (PCP) is an approach within the public procurement of innovation, developed specifically for the procurement of R&D services rather than actual goods and services; if the goods or services developed during the R&D phase are to be procured, this would then be based on a separate procurement process.

PCP involves different suppliers competing through different phases of development. The risks and benefits are shared between the procurers and the suppliers under market conditions.

For PCPs, risk-benefit sharing under market conditions means that procurers share the benefits and risks related to the IPRs resulting from the research and development (R&D) with suppliers at market price.

Competitive development in phases is the competitive approach used in PCP by procurers to buy the R&D from several competing R&D providers in parallel, and then compare and identify the best value for money solutions available to address the PCP challenges.

In Northern Ireland the most prevalent example of pre-commercial procurement is the Small Business Research Initiative which, as mentioned previously, is aimed at procuring products and services to address problems or to help achieve required policy outcomes where appropriate solutions are currently not available in the market.

While the SBRI is and will continue to encourage the development of new and innovative products and services by Northern Ireland companies, the specific procurement processes available under the EU Directive to procure innovative products and services for the public sector are not being widely used.

6.2 Buyer Research

Tender Processes which Foster Innovation

Variant Bids

As detailed in the previous section, the acceptance of variant bids is another means of encouraging innovation through public procurement. However, the majority of public sector buyers interviewed do not actively use this process due to contract relevance and the difficulty in evaluating a variant bid.

Scoring Innovation

Similarly the public sector buyers interviewed reported that they rarely allocated a weighting to innovation in the scoring criteria. Their reasons for this are as follows:

- *“Innovation is scored within the methodology, not separately.”*
- *“We would score added value rather than innovation as Innovation has so many different interpretations and is difficult to define scoring criteria for it.”*
- *“Innovation is too difficult to evaluate.”*

Those buyers who did report that they had scored innovation separately in the past had mixed experiences in terms of how well it procured innovative products and services. Below are some of their comments:

- *“We would have received exactly the same bids if we hadn’t scored innovation.”*
- *“Suppliers misunderstood what we meant by innovation and instead provided us with added value.”*
- *“There was no clear definition in the bids as to why the innovation was needed and how it would be innovative.”*

The research indicates that in practice, scoring innovation in a procurement process does not necessarily result in the procurement of innovative products and services.

Total Life Costs

A consideration of total life costs (the total cost of the product or service over the lifetime of the contract) is important when procuring innovation since innovative products and solutions can cost more than the standard option but can generate greater cost savings across the life of a contract.

The public sector buyers interviewed were asked if they consider total life costs when setting the weighting for cost in a contract’s terms of reference. The majority of buyers reported that they do consider this.

In some instances total life costs are considered on contracts above the EU threshold only but in the main buyers reported that they consider this for all contracts.

Overcoming Barriers

The buyers interviewed were asked to provide suggestions on how barriers related to procurement processes might be overcome to facilitate procurement of innovation. These are some examples:

- *“Having a better understanding of how the Innovation Partnership will work and how we can use it to buy-innovative products and services would help.”*
- *“Proper innovation should be set aside from procurement. The innovation partnership will facilitate this as the initial stage supports development.”*
- *“The facilitation of pilots for new products and services.”*

The buyers interviewed clearly recognise that while there are processes in place which permit the procurement of innovation, in practice these do not always work.

6.3 Supplier Research

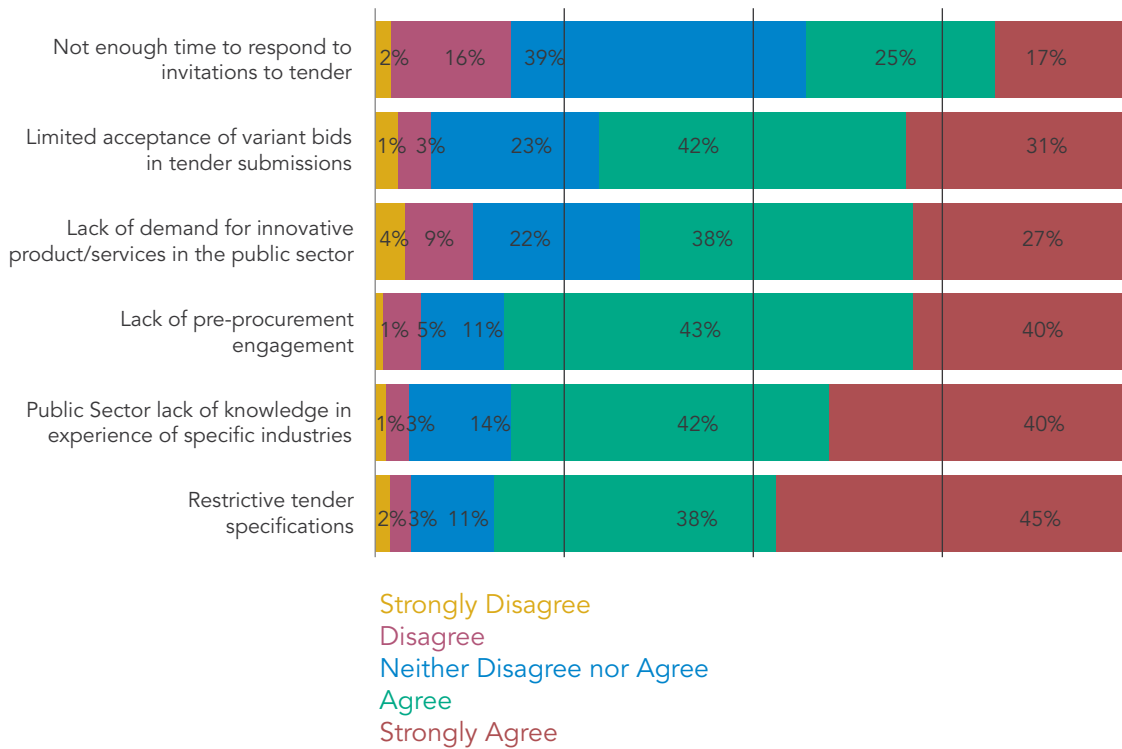
Restrictive Tender Specifications

A common barrier faced by suppliers when trying to supply innovative products and solutions to the public sector is restrictive tender specifications. This is a direct result of buyers favouring the more structured tender processes to minimise the risk of legal challenge.

As part of the online survey suppliers were asked:

To what extent do you agree / disagree that the following are barriers to supplying innovative products and services to the public sector?

(Total No. of respondents: 256)



Restrictive tender specifications and lack of pre-procurement market engagement are the top two barriers with 83% of respondents agreeing or strongly agreeing.

The focus group research also identified this as a common barrier:

“We find because we don’t have so many competitors, if we don’t know about a tender and the tender comes out we can almost read the specification and know who has influenced it, given that there are certain distinguishing features in there that are blatantly not ours, they are someone else’s, and if we wanted to be a copycat we could include those things but that’s not what we are about. This restricts innovation.” **Core Systems**

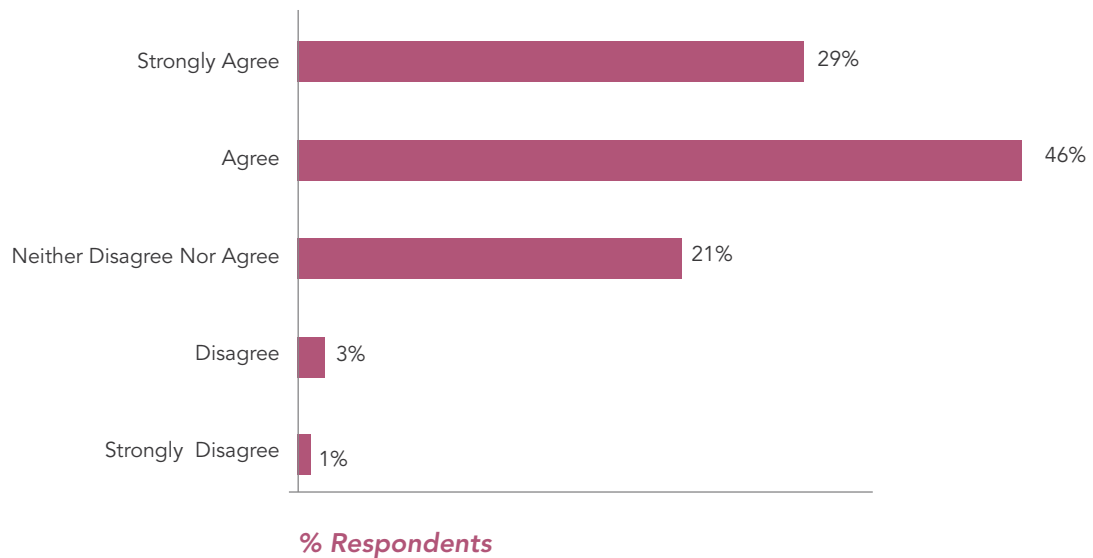
Restrictive tender specifications are a common barrier in respondents from both the private sector and community and voluntary sectors as well as across organisation size range and sectors.

When asked how this might be overcome, suppliers suggested greater use of outcome-based specifications.

Scoring Innovation

In relation to scoring innovation suppliers were asked:

**To what extent do you agree or disagree that the public sector does not have sufficient expertise to score innovation in the procurement process?
(Total No. of respondents: 252)**



The majority (75%) of respondents agreed or strongly agreed that the public sector do not have sufficient expertise to score innovation in the procurement process.

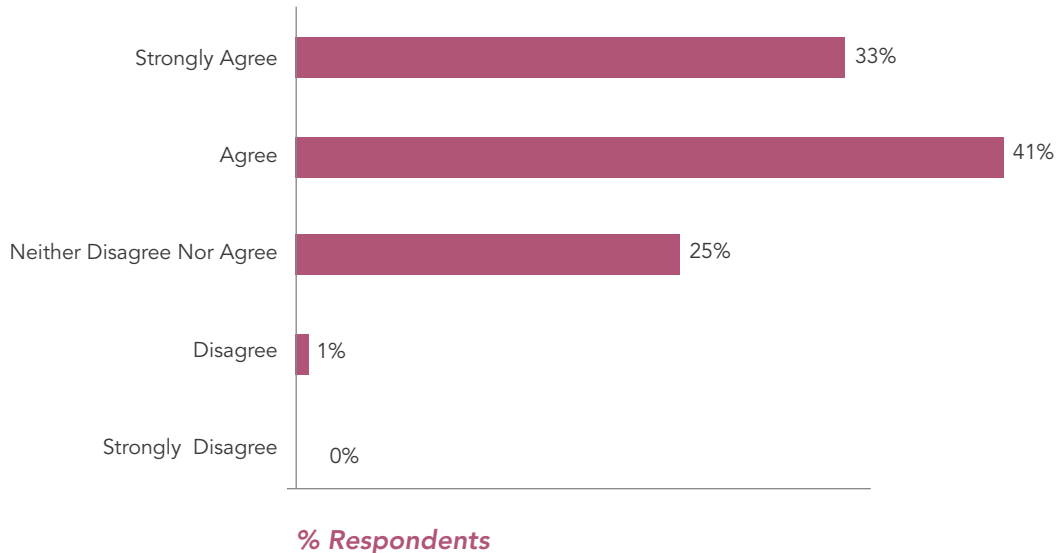
As with the findings from the buyer research, innovation can be very subjective and so it is not surprising that suppliers and buyers have different ideas about what is innovative. This might account for the high percentage here. That said, pre-procurement market engagement which allows buyers to discuss their requirements with suppliers in advance of a procurement process may help to overcome this.

Scoring innovation may therefore not be the best way to procure innovative products and services particularly when suppliers must meet restrictive tender specifications. One suggestion to overcome this is wider use of outcome-based specifications. The buyer could provide details of their requirement, the budget available and the anticipated outcomes. This would allow the supplier to provide innovative solutions to meet the requirement and the buyer can then score the solution’s ability to meet the requirement, rather than scoring how innovative it is.

Consideration of Total Life Costs

In relation to total life costs suppliers were asked:

*To what extent do you agree or disagree that inadequate consideration of Total Life Cost when setting the weighting for price in a public sector tender, is a barrier to innovation?
(Total No. of respondents: 252)*



The majority (74%) of respondents agreed or strongly agreed that the inadequate consideration of total life costs when setting the weighting for price in a public sector tender is a barrier to innovation.

This is in contrast to the buyer research findings where the majority of buyers interviewed reported that they do consider total life costs when setting the weighting for cost.

One explanation for the vast difference between the views of suppliers and buyers on this point may be that while buyers do consider total life costs they may not show this explicitly in the tender documentation, or perhaps there is not adequate consideration given to it when setting the weighting for cost.

Variant Bids

In keeping with the buyer research findings, the majority of suppliers reported that they had no experience of variant bids, either in seeing them accepted by a public sector body or through submitting a variant bid.

The small number of suppliers who had experience of submitting a variant bid were asked how successful they felt the process was at procuring innovative products and services:

- 33% reported that it was a very successful or successful way of procuring innovative products and services. These respondents were asked to provide a reason why they felt this. They believe, in summary, that it provides the public sector with more tailored options.
- A further 33% of respondents reported that they were unsuccessful or very unsuccessful in procuring innovative products and services were also asked to explain that their responses. Their responses are summarised below:
 - The public sector still go for the lowest price.
 - The public sector will still go with the standard submission instead of the variant bid.

The small number of buyers interviewed who do accept variant bids also had mixed views on their success.

Therefore, the acceptance of variant bids in practice is not always a successful way of procuring innovative products and services.

6.4 Supplier Case Studies

With regards to procurement processes and practice the supplier case studies provide examples of where innovation has been fostered, within the current procurement processes available to the Northern Ireland public sector:

Pilot Projects

- **PlotBox** – Ballymena Borough Council worked with PlotBox allowing them to deliver a pilot mapping project on one of the council's cemeteries. This allowed the company to demonstrate how they could improve the service the council offer and provided the council with the opportunity to assess the value of the solution to them.
- **Start 360** – Start360 have been able to provide pilot programmes for public sector bodies in the past which have proven very successful. However, their experience is that these pilots are rarely introduced to mainstream service delivery due to either lack of budget or lack of drive to improve the service delivered.

Pilot projects are permissible under the current EU Procurement Directive regulations and could be more widely used to test innovative products and services before a formal procurement process. The best practice examples explored through this study all involve an element of piloting or testing in advance of the procurement process.

The supplier case studies and best practice examples are presented in detail in the supplementary report which is available for download from the NICVA web site:
<http://www.nicva.org/resource/public-procurement-innovation>

7.0 RECOMMENDATIONS FOR ACTION

This section presents a set of recommendations for activity based around these themes, and addresses the barriers experienced by both buyers and suppliers.

Aspiration	Recommended Activity
Theme 1: Knowledge and Skills	
Public sector commissioners and buyers with greater market knowledge	Public sector organisations could carry out more market research in advance of the procurement process, particularly in those markets which are fast moving such as technology/ICT. In line with the principles put forward by the UK Crown Commercial Service - New DNA for Commercial Activities– <i>“more time should be spent where we can maximise value - before a formal procurement starts and after the contract has been signed.”</i> ¹⁴
Greater commercial skills within the public sector	A focus on the development of commercial skills of public sector buyers and commissioners in Northern Ireland similar to that currently offered through the Crown Commercial Service in the UK. ¹⁵ The training could increase commercial awareness and support buyers and commissioners in their work to identify and evaluate innovative products and services, and in turn could achieve greater value for money in contracts.
Theme 2: Communication	
Greater communication between commissioner and buyer within the public sector.	<p>Public sector organisations could introduce, where appropriate, category buyers with a knowledge of specific industries who could create a stronger link between commissioner and frontline buyers to help demonstrate the benefits of new innovative products and solutions. The category buyers could be responsible for ensuring that the public sector bodies are up to date with new products and services in the market in advance of initiating the procurement process.</p> <p>While some of the bigger Centres of Procurement Expertise do have category buyers this is something that might be considered for the new super councils when they are in full operation.</p>
Greater communication between commissioner / buyer and suppliers	<p>Public sector organisations could carry out more pre-procurement market engagement with suppliers where appropriate, and in particular for technology/ICT contracts. As detailed above, this is in line with the principles put forward by the UK Crown Commercial Service’s New DNA for Commercial Activities. This will provide them with a greater insight into what’s on offer in the market before developing their specifications for the procurement process.</p> <p>This could be further facilitated by the introduction of an electronic Public Sector Innovation Platform where suppliers and buyers can engage on a regular basis.</p> <p>Well in advance of a procurement process, buyers and commissioners could use the electronic platform to highlight their future requirements and the issues they need resolved.</p>

¹⁴ Crown Commercial Services (2014) *Transposing EU Procurement Directives*.

¹⁵ Crown Commercial Services (2014) *Buying and Managing Government Goods and Services more Efficiently and Effectively*

Aspiration	Recommended Activity
<p>Greater communication between commissioner / buyer and suppliers</p>	<p>Suppliers could confidentially respond with their ideas and solutions. This could work as follows:</p> <ul style="list-style-type: none"> • Suppliers could upload profiles of their innovative product or service offering (whether already developed or in development) and provide an overview of the types of contracts they would be interested in servicing with it. • The public sector body could then search this database of suppliers to gather information on the products and services in the market that might fit their requirement. • A Request for Information could be published via the site inviting suppliers to respond. • If the new innovative products and services identified are already developed and tested, the buyer can use the process to inform specification development and then move into formal procurement processes – ensuring that no individual product or service is favoured. • If the product or service identified is still in development phase, and the public sector body can prove the need, then it could move down the SBRI route or indeed apply for a portion of the innovation fund as discussed later in this section – to move the product/service development forward. <p>Central government departments and other public sector organisations should trial sector specific Meet the Commissioner Days or innovation open days with appropriate departmental contacts in attendance. The events would facilitate supplier engagement with the departmental contact/user rather than just the procurement professionals.</p>
<p>Theme 3: Collaboration</p>	
<p>Cross-departmental Budgeting</p>	<p>Research indicates that there can be difficulty with the public sector fully appreciating innovative products and services which have the potential to save money across more than one department or public sector body, as this affects more than one budget holder.</p> <p>One recommendation might be for the appointment of an individual within the public sector to identify cost saving relationships between contract delivery elements which are governed by different departments such as described above. Category buyers might also have a role in this.</p>
<p>Greater collaboration between suppliers to increase their capability and capacity</p>	<p>There is evidence to suggest that collaboration between bidding companies can foster innovation in terms of the development of new solutions to public sector issues and requirements. To that end suppliers could be offered training aimed at helping them identify collaborative opportunities, develop and manage successful collaborations to provide more innovative offerings to the public sector market. This is particularly critical in view of the Review of Public Administration and the formation of the new super councils. Suppliers could be encouraged to come together to offer more innovative products and services to these new customers.</p>

Aspiration	Recommended Activity
Theme 4: Removing/Reducing/Managing Risk	
<p>A public sector which can encourage innovation without the threat of the following risks:</p> <ul style="list-style-type: none"> • Challenge and litigation • Delaying contract commencement • Financial loss • Personal/professional risk 	<p>The research indicates that the feedback provided by Northern Ireland public sector bodies on tender submissions can be insufficient, leaving suppliers confused about where their bid fell down and how they could improve in future competitions. This can, in some cases, breed suspicion which may lead to consideration of embarking on the legal challenge route.</p> <p>A commitment to providing more detailed feedback to suppliers might reduce the incidence of legal challenge. This could create a less contentious environment and contribute gradually towards an environment where (in combination with other measures) innovation might be more encouraged.</p> <p>The introduction of an intermediate body, such as an ombudsman, which could be the first port of call if a supplier has a grievance regarding how a procurement event was managed. It could provide independent, low-cost advice on whether the supplier has a legitimate case before going to the expense of a full legal challenge. This has been effective in other European countries.¹⁶</p> <p>This could result in fewer cases going to full legal challenge and therefore reducing the risk of challenge for public sector organisations.</p> <p>Introduce an innovation fund which is made available to public sector organisations committed to encouraging innovation e.g. The Police Innovation Fund. This could allow public sector bodies to consider and trial innovative products and services. Since this is conducted as a separate process it could reduce the risks associated with:</p> <ul style="list-style-type: none"> • <i>Financial loss</i> – the money used is separate to the main departmental budget and if the trial is unsuccessful the financial loss is not borne by the department. • <i>Delaying contract commencement</i> – the trials and pilots could be carried out in advance of the current contract being renewed to ensure that the new product or service trialling is not impacting upon service delivery. • <i>Personal professional risk</i> – Since the trialling could be carried out separately to normal service delivery this also reduce the risk to the public sector buyer or commissioner on a professional level <p>This fund could be ring-fenced from future Change Funds similar to that highlighted in the 2015-16 Northern Ireland Budget, and could be available to organisations who can demonstrate a genuine need for a new product or service that has not yet been adopted in the public sector and would facilitate economic and operational efficiencies.</p>

¹⁶ Davis, P et al (2014) *The role of Procurement Review Bodies post Transposition of the Remedies Directive in Europe*.

Aspiration	Recommended Activity
<p>A Public Sector equipped to manage risk in the procurement of innovation</p>	<p>The research demonstrates that the public sector are not well equipped at managing risk. Buyers and commissioners could be offered training on the identification, reduction and mitigation of risk in the procurement of innovation.</p>
<p>Theme 5: Tender Practice</p>	
<p>Contracts with less restrictive specifications in order to encourage innovative solutions.</p>	<p>The research indicates that the current procurement processes available to Northern Ireland companies do permit the procurement of innovative products and services. However, these are more costly to use and take longer than the standard, more restrictive tender processes. As a result, suppliers are reporting that tender specifications are too restrictive and don't give them scope to introduce innovation. To overcome this, and where appropriate, the public sector could use more outcome-based specifications. The terms of reference would therefore include:</p> <ul style="list-style-type: none"> • The identification of the requirement • The budget • The anticipated outcomes <p>This could give the supplier more scope to introduce innovative products and services to meet or exceed the requirement.</p> <p>The buyer could then award scores based on how well the requirement is met rather than scoring innovation specifically, thus sidestepping the difficulty of scoring innovation.</p> <p>Terms of Reference which explicitly demonstrate how total life costs have been considered when setting the weighting for cost. There is clear inconsistency between buyer and supplier perceptions of how much total life costs are considered when setting the weighting for cost in the evaluation criteria. Perhaps if this was more explicitly presented within the Terms of References suppliers would have more confidence that this is being considered adequately.</p>
<p>Theme 6: Incentivising Innovation</p>	
<p>Public sector organisations and employees being rewarded for procuring innovative products and services</p>	<p>Research has shown that there is little or no incentive for a public sector employee - buyer or commissioner - to step outside the normal procedures to encourage innovation, particularly when it attracts the risks detailed previously. In parallel with the above recommendations the public sector should initiate an incentive programme for employees who actively encourage innovation through their procurement practices, particularly where the new solution demonstrably achieves greater value for money.</p> <p>Potential recommendations to overcome this could form part of a wider public sector reform agenda and would be outside the scope of this study.</p>

The Implementation of Recommendations

The implementation of these recommendations will require co-ordinated action across the public sector, and not just in Centres of Procurement Expertise. However, all of the indications from this research study are that the public sector is **committed** to taking on the challenge of facilitating and stimulating innovation through public procurement.

Initial steps are being taken in Great Britain – for example through the work being undertaken by the Crown Commercial Service, pre-procurement consultation processes, etc. Some of this work has also begun in Northern Ireland, but has not yet progressed quite so far.

However, there are very positive indications that moves towards the required level of co-ordinated action will be entirely possible in Northern Ireland – driven by:

- The potential adoption of initiatives such as the Crown Commercial Service (driving the development of enabling processes, and enabling skills);
- A common will and commitment to fostering greater innovation through public procurement, and
- A greater commitment to:
 - Implement initiatives that are already available and designed to achieve this objective; and
 - Develop new initiatives that will **further** foster innovation through public procurement.

There is no doubt that the implementation of some or all of these recommendations will involve many challenges and potential obstacles – perhaps in relation to:

- Human Resources – team structures, job specifications, contracts, performance measurement and management, etc;
- Inter-departmental budgeting and accounting processes;
- The development of skills;
- The more widespread adoption of new processes that are currently the exception rather than the rule;
- The potential revision of timelines in relation to consultation processes (pre-procurement), and in relation to return on investment (measurement of ‘value’), etc.

These points are not listed here in any attempt to be prescriptive or to be fully comprehensive in relation to the implementation challenges that need to be addressed. They are purely indicative, and need to be developed further, but are beyond the scope of this research study.

The terms of reference for this study focused on

- (ii) A programme of research to examine this key question:

‘To what extent does public procurement policy and practice in Northern Ireland encourage innovation’;
and

- (iii) The proposal of recommendations for improvement.

A follow-up challenge now needs to be taken up in relation to:

- (iv) The prioritisation of those recommendations;

- (v) The development of action plans for:

- a. The implementation of recommendations; and
- b. The identification of barriers and challenges to implementation, and the development of measures to overcome those barriers and challenges.

This work could be initiated by a cross-departmental working group, involving representatives from various procuring departments (e.g. commissioners), COPEs, the Public Service Reform Division of the Department of Finance & Personnel, and other relevant departments and groups – either an existing working group involving these parties, or a dedicated working group established expressly to address the challenges of fostering innovation through public procurement.

Fostering Innovation Through Public Procurement - a research study

A Report for NICVA

**Centre for
Economic Empowerment
Research Report: eleven**

