iDEAS
at Daresbury

Beyond Networking

Knowledge, Exchange and Innovation

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Lancaster University MANAGEMENT SCHOOL

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The University of Manchester
Manchester Business School

UNIVERSITY OF LIVERPOOL

IDEAS
at Daresbury

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Helen Fogg.

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Contents

Foreword

The ever increasing nature of global competition and the challenges posed by the recent financial crisis have highlighted the importance of innovation in terms of its role in driving competitive performance and economic growth at both firm and national level.

The ability of businesses to adapt to new market, strategic and technological opportunities is therefore central to their long term growth and prosperity and that of the United Kingdom economy as a whole. For businesses to be successful in this endeavour they will need to both organise and manage their own internal resources and skills but will also be required to effectively collaborate and network with other firms and organisations to sustain and enhance their competitive position.

This booklet seeks to highlight, frame and hopefully start to answer many of these issues around creativity, collaboration and growth.

Prof. Jeremy Howells

Executive Director,
IDEAS at Daresbury

Eddie Davies Chair in
Entrepreneurship and Innovation,
Manchester Business School

Introduction

IDEAS at Daresbury is a collaboration of Lancaster, Liverpool and Manchester Business and Management Schools and ImaginationLancaster, a creative research lab at Lancaster University.

In March 2009, IDEAS at Daresbury was fortunate enough to be awarded funding by the European Regional Development Fund and Northwest Development Agency. This funding was used to deliver a 16 month programme of in-depth knowledge exchange, to drive innovation into 40 new technology businesses located at Daresbury Science and Innovation Campus (DSIC) and within its surrounding network.

The project team, collocated at DSIC, aimed to connect the participant new technology businesses into the wider knowledge networks of the partner institutions via a series of short, highly interactive workshop programmes, master classes, academic mentoring and student projects. The project also aimed to develop new knowledge exchange mechanisms, taking best practice from its delivery and expanding that learning into the wider region.

This booklet has been developed following delivery of the final workshop programme *Beyond Networking*. Initially, it provides details of the five workshops which comprised the programme, followed by an explanation of the process undertaken to individually analyse the participants' networks, using data collected in the first workshop. The latter part of the booklet details the impact of the project, firstly in terms of the businesses who participated in the programme, and then from an academic research perspective.

Helen Fogg
....
ERDF Project Manager,
Lancaster University Management School

The Beyond Networking Workshops

January and February 2010

Beyond Networking:
Creativity, Collaboration & Growth

This workshop programme was developed to help participants to focus on the development and management of their networks, creative thinking and the innovation of products and processes.

1
Connect
Maximise the benefits of working with others
- Understand networks and how to use them more effectively
- Experience new and effective approaches to developing beneficial relationships

2
Create
Generate new ideas through collaboration
- Foster creativity by working with others
- Introduce and apply tools which can be used to enhance day-to-day creativity and idea generation

3
Refine
Develop concepts into practical propositions
- Grow ideas into attractive product/service offers
- Develop attractive proposals to enter new markets
- Effectively communicate ideas to customers

4
Sell
Translate propositions into successful products
- Identify key partners for product/service development and collaboration
- Grow proposals into saleable products or services
- Minimise risks, costs and time in development processes

5
Review
Reflect and implement
- Individual surgeries with university experts in networks, invention and product/service development
- Discuss bespoke report and develop a plan of action
- Share workshop conclusions

2 Create
26th Jan

Maximise the benefits of working with others

Generate new ideas through collaboration

1 Connect
19th Jan

5 Review
16th Feb

3 Refine
2nd Feb

Translate propositions into successful products

Develop concepts into practical propositions

4 Sell
9th Feb
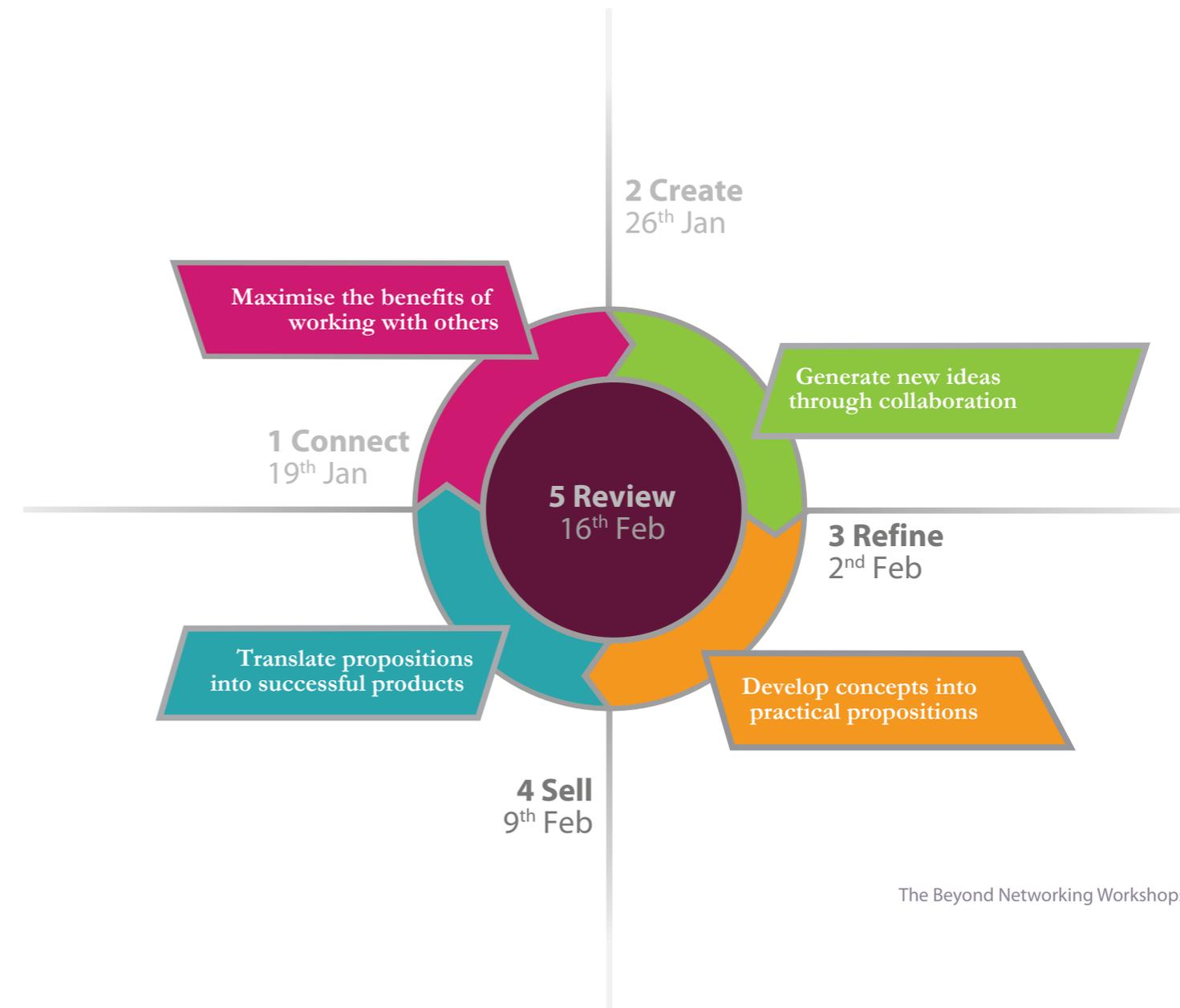
Workshop 1: Connect

19th January 2010

Maximising the benefits of working with others

This workshop looked at social networks and how value can be created within them by providing simple and hands-on tools to help you benefit from your contacts. Networks are an important means through which companies can access knowledge and the resources needed to foster innovation.

Being immersed in a social context, everyone has a range of people they turn to when needing to discuss an idea or address a problem. These people represent a 'social capital' that everyone can 'spend' for their own benefit. Academic literature has established that, if used correctly, social capital can help improve the performance of a company though connections with information and resources.

In order to represent this idea in a simple and concrete way, we introduced the concept of 'nets', an idea specifically developed for this workshop. A net is a way to visualise networks in action and can be defined as a subset of contacts that are activated to carry out a specific task. This could be solving a specific manufacturing problem, launching a new product or generating new ideas. Through visualising your network and the nets hidden within it you can plan future actions in a more strategic and efficient way. Maybe one of your contacts is the missing link to developing a project your company has long considered but never made happen.

Marzia Mortati

PhD Student,
ImaginationLancaster

Tools

In the *Connect* workshop we used practical and hands-on tools to visualise, understand and extract the maximum advantage from a business network.

Tool 1: Network Identification

Each participant completed a guided questionnaire which identified some of the most important contacts in their personal network.

Tool 2: Contact Mapping

The second tool helped participants visualise the "shape" of their network and recognise the types of relationships between contacts. This added a new layer of understanding: everyone is conscious of the relationships around them, but it is difficult to identify the most important ones until they are all represented on paper.

Tool 3: Networks in Action - Nets

Every contact identified was assigned a role. Participants were then introduced to the idea that relationships work only when *activated* for specific purposes. This subset of active contacts represents a net.

Tool 4: Table of Resources

Each contact can offer different kinds of knowledge. By categorising their contacts into three groups (those of Finding, Testing and Exploiting), participants had the opportunity to reflect on the resources they would need to innovate in a specific direction. Moreover they looked for these resources in their contacts, helping to develop an action plan in response to an exemplary innovation problem.

Workshop 2: Create

26th January 2010

Generate new ideas through collaboration

Using the experience and understanding developed in the previous (networking) session the *Create* workshop addresses two issues often overlooked when thinking about innovation, namely creativity and invention.

In the *Create* workshop we explored the requirements and characteristics for creativity to grow and flourish. Applying cutting edge research in creativity and design we determined that, almost by definition, anyone involved in business will be creative and have the potential for that creative ability to be amplified and extended. This can be achieved by structuring problem solving activities and realising that after an intense period of work on a problem there should be a period of reflection that enables inventive ideas to emerge.

We introduced a number of approaches to help explore ideas and concepts in the initial 'hard graft' stage of idea development. We did this by allowing all participants to directly experience one of these approaches for enough time to really get a flavour of the experience and then reporting back to the group as a whole.

In addition to 'classical' brainstorming we designed 3 new approaches specifically tailored to creativity in SMEs, these were, Creative Thinking Hats (reacting against de Bono), Bad Ideas (a technique for side-stepping the self-censorship of ideas) and Physical Problem Solving (looking at the fundamentals of creativity and collaboration).

Dr. Leon Cruickshank

Director of Research,
IDEAS at Daresbury

Senior Lecturer in Design,
ImaginationLancaster

Key Points

The *Create* workshop emphasised the use of creativity in everyday business to foster the occurrence of inventive ideas for effective problem solving.

- Invention is the starting point of innovation processes. It is characterised by novel ideas and creative leaps.

- Creativity can be provoked and incited intentionally when fresh ideas are needed to solve a problem.

- Specific tools and methods like Creative Thinking Hats, Bad Ideas, Brainstorming or Physical Problem Solving are designed to help facilitate and encourage free thinking, participation and sharing of ideas.

- These methods make creativity effectively applicable to specific business environments and varying demands.

- Practicing creative methods in a group can be a powerful way to get different and inspirational perspectives on a problem that might seem unsolvable.

Workshop 3: Refine

2nd February 2010

Develop concepts into practical propositions

The way in which value is created and extracted has changed fundamentally in the last 10 years. For example, an individual can compete directly with major high street banks through people-to-people lending services like Zopa. A set of encyclopaedia would cost at least a few hundred pounds only a decade ago, but now we have free online services such as Wikipedia. Some companies, such as Build-A-Bear Workshop and Lego, get their customers to do the product development work for them and at the same time charge them for the experience.

As these examples demonstrate, we live in times which require new ways of appreciating and conveying customer value. Some companies can focus too eagerly on the product or service that they offer rather then the value these represent to the customer. For example, teenage customers are more likely to pay extra for a better looking and sounding mobile phone than one that has a slightly (and probably unnoticeably) faster processor. It is easy for the manufacturer to focus on the more expensive and less valued feature and ignore the crucial experiential dimension.

Value propositions are often communicated on the basis of price and performance attributes. Whilst these dimensions are important, it is equally important, if not more, to articulate and express the experience that the product/service gives. In other words, it should not be just about what the product does, but what the product does to the customer (i.e. the experience it provides).

Dr. Noordin Shehabuddeen

Director,
Innovation Academy,
University of Liverpool
Management School

Key Points

.... Don't ignore the "Je ne sais quoi" from the customer – look closer
and there could be a pot of gold waiting to be found.

.... Understand the experience that your product / service provides
to the customer – this could be where the value resides.

.... When communicating experience, explore how you can affect the six senses,
particularly the sixth one, which is deeper, affecting feelings and emotions.

.... Don't spell out every positive aspect about your offering, only
focus on those that reverberate with the customer.

.... Understand what the offering represents, not just what it is.

Workshop 4: Sell

Translate propositions into successful products

In this workshop we looked at the process of taking forward a concept product or service to a saleable entity.

Spending time with the customer to hammer out a detailed specification right at the outset is critical to later success. The customer may struggle to 'see' a product or service exactly how the inventor does, so a variety of communication techniques must be used to remove confusion and help clarify the concept.

Drawings can help to explain ideas, but the inventor must be careful to draw the client's attention to what is shown in the drawing not just the superficial 'flashiness' of the presentation! Comments made by most potential customers tend to be quite polite, so it is necessary to qualify the positive comments and to not fiercely defend points that are criticised.

The appropriate use of test rigs and models was explored, noting that it is essential that the reason for building and testing is known and how the results from each test will be measured. Prototypes are the final verification that things are OK to go to the customer, but the cost and time of getting the final version of the product documented and appropriately approved must also be considered.

Finally, it was advised that with careful foresight, most new product development projects could be eligible for grant support and favourable tax treatment. It is important to secure grants right from the start of a project to maximise their benefit to the business.

Tim Jones
....
Head of Undergraduate Studies,
Manchester Enterprise Centre,
Manchester Business School

Key Points

- Get the specification 'must haves' right
- Communicate with drawings and models
- Listen to customer comments, hints and clues
- Test critical aspects separately
- Combine everything in a pre-production prototype
- Carefully consider necessary approvals, testing and documenting
- Seek funding for costly activities with grants and tax allowances

Workshop 5: Review

16th February 2010

Reflect and implement

In the final session all the presenters from the previous workshops were on hand to briefly summarise the key learning points. This was followed by group discussion where participants were given the opportunity to probe and question the workshop content and consider how the learning could be applied to their individual organisations. If requested, individual participants could also have short one-to-one consultancy/mentoring sessions with the presenters.

The participants were then presented with an individual bespoke report for their business. The report, in addition to containing a summary of key learning points from each session, provided an individual overview of the organisations' current networks, from the perspective of the participant, and some insight into ways in which the management and maintenance of these networks could be improved. Further detail on how this information was prepared is provided in the following section.

Dr. Kurt Allman

Business Manager,
Manchester Enterprise Centre,
Manchester Business School

Concluding the workshop series

With the day-to-day engagement in knowledge exchange activities it's easy to lose sight of the transformational potential this has for academia and business. Beyond our ongoing business support, we have seen a community form and start to develop into a strong and highly supportive network. This has been facilitated by the range of inputs and activities that we have provided for companies, which in turn are driven by latest research around innovation, social networking and creativity.

It's also important to recognise the impact that this series of workshops has had on the facilitators of the program. This group of academics and knowledge exchange professionals from across the partner institutions have relished the knowledge exchange that has taken place between each other in this unique collaboration. The growth of an experiential approach to knowledge exchange shows this cross-facilitator innovation in practice. A collaborative approach to programme design being the foundation of events, with the process then being driven forward through the manipulation of fine details via graphic and interaction design providing companies with a rich, dynamic experience.

This is exemplified by the report created for each company, this not only contained a bespoke network analysis for each company but also draws companies into a re-examination of the workshops content and adds a further dimension to knowledge exchange.

Dr. Leon Cruickshank
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Knowledge Exchange Pathways

A detailed example of knowledge exchange in action

Going beyond workshops

Knowledge exchange is a complex, dynamic and highly interactive process that can be very difficult to capture and quantify. The workshops described in this report previously are only the most visible aspect of the knowledge exchange culture we developed with the companies at Daresbury. We also consciously developed more longitudinal streams or pathways of knowledge exchange to propagate richer and more organic interaction and exchange.

This section focuses on one of these pathways as an example of the advantages of developing this integrated approach. The need for brevity and the still ongoing evaluation of the project guided our pathway selection. Rather than looking at, for instance, experiential protocols, peer-to-peer exchange or the impact of a designed environment, we have selected a more explicit and easily communicated pathway.

In the following pages we describe our 'network analysis' pathway. This articulates how we drew together academic theory and interaction design to prompt a step change in the depth and specificity of analysis that it's possible to provide individual companies with. We go on to show how this forms a key component of the bespoke report produced for each company in the program.

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Director of Research,
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Senior Lecturer in Design,
ImaginationLancaster

Analysing entrepreneurial networks

It has been widely recognised that active networks offer advantages to entrepreneurs. It is through networks that entrepreneurs can promote their products, acquire resources and get access to new information. It is likely that the largest advantage that entrepreneurs receive from networks is the opportunity to tap into collaborative groups where they can share business ideas and discuss and review their plans with others.

The *Connect* workshop was designed to assist with this process. Firstly, to invite the participants to reflect on their networks and the importance of each of their contacts and to examine the role of their networks in solving past and current problems. Secondly, the workshop explored and tested several advanced network theories from an academic perspective and resulted in a range of publications both submitted and in preparation for conferences and journals.

Overall, the workshop programme has highlighted how interactions between academics and entrepreneurs can result in mutual benefits. The entrepreneurs benefited from being given access to recent knowledge and research developed in the academic world, while providing university academics with an opportunity to apply their current knowledge to real world problems as well as producing data for future publications.

Dr. Danny Soetanto
....
Research Associate,
IEED, Lancaster University
Management School

The analysis process

The data was gathered in the *Connect* workshop through an interactive session where the participants examined their networks in a practical way. Four main characteristics of a network were analysed; geographical/spatial distance, strength of relationship, diversity/heterogeneity of contacts and the overall structure of network.

Geographical distance: networks with local contacts offer a rich knowledge flow due to a reduction in the direct costs associated with frequent interactions while networks with non-local contacts provide an opportunity to gain new knowledge.

Strong and Weak: connections can be described as strong where relationships are based on mutual trust and commitment or conversely weak, which can also be beneficial if the relationship provides unpredictable bridges to new knowledge or resources.

Diversity: heterogeneous environments give access to a wider range of resources while interacting with contacts from a similar (homogeneous) background allows firms to obtain refined knowledge.

Density: network structures in which all partners are connected to and interact with each other will reduce risks and are beneficial for the transfer of tacit knowledge and development of trust and legitimacy. Firms that have sparse network structures will benefit from the diversity of information and the brokerage opportunities created by the lack of connections between separate clusters in the networks.

The overall analysis steps are presented opposite.

Programme Participant

Bespoke Report

Maps and Questionnaire

Facilitated Workshop

$$\sum_{p=1}^{6}\left(\frac{a_p}{n}\right)^2$$

Numerical Analysis

Network Metrics

1 Mapping Network Structure

2 Calculating Network Characteristics

3 Comparing Network Characteristics
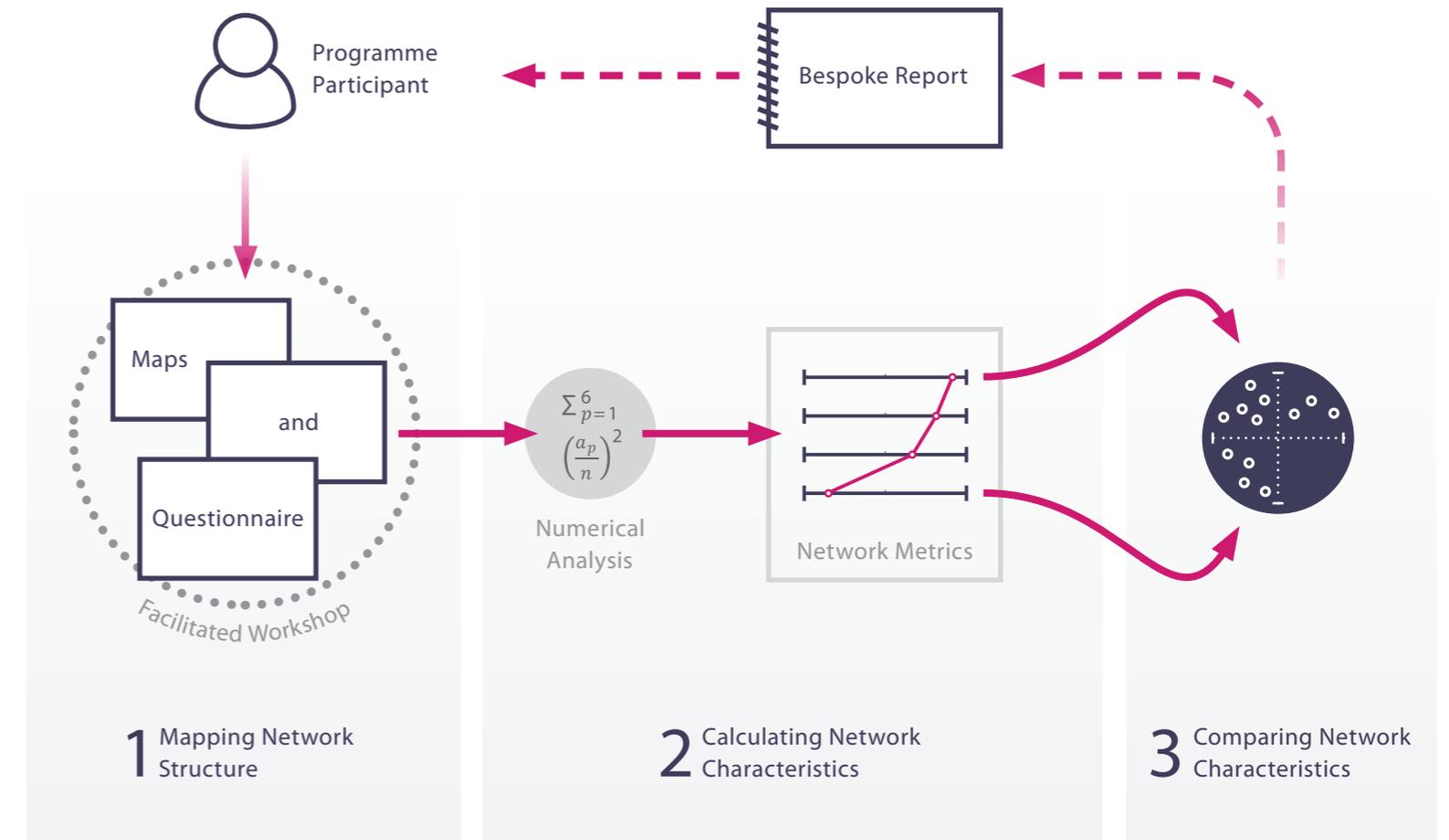
Step 1
Mapping overall network structure

During the *Connect* workshop, entrepreneurs were asked to draw all the potential connections from 12 prominent contacts they described. Then the participants examined the role of these contacts in two different scenarios; firstly in solving past problems and secondly current problems.

The activity generated a description about the overall structure of an entrepreneur's network and clusters within that network that help solve problems – so called "Nets". The figure opposite shows some of the layered maps generated by participants during the workshop.
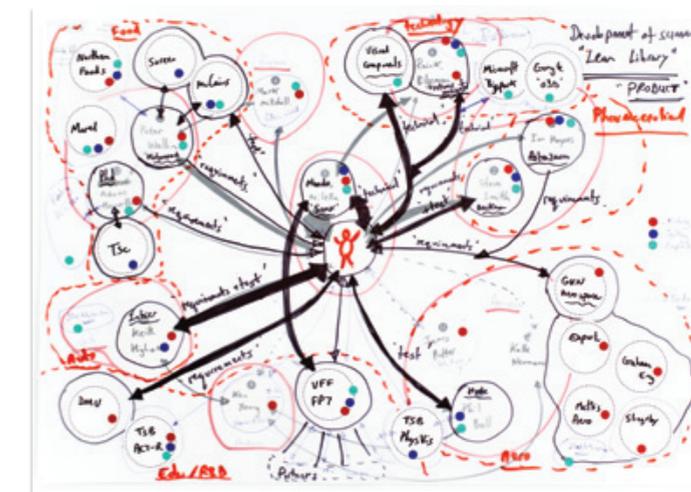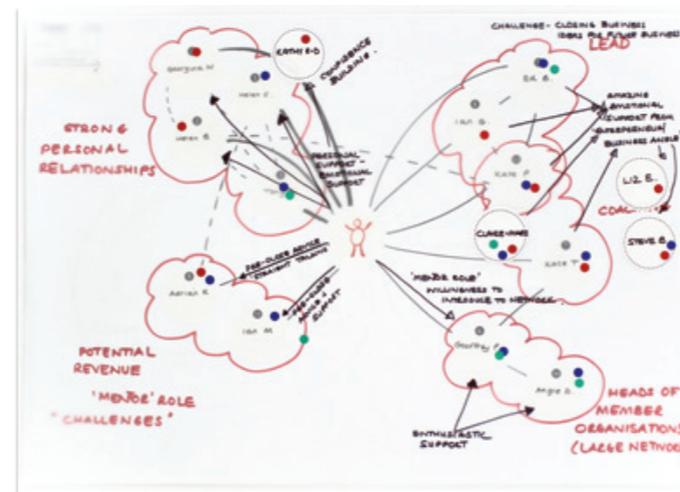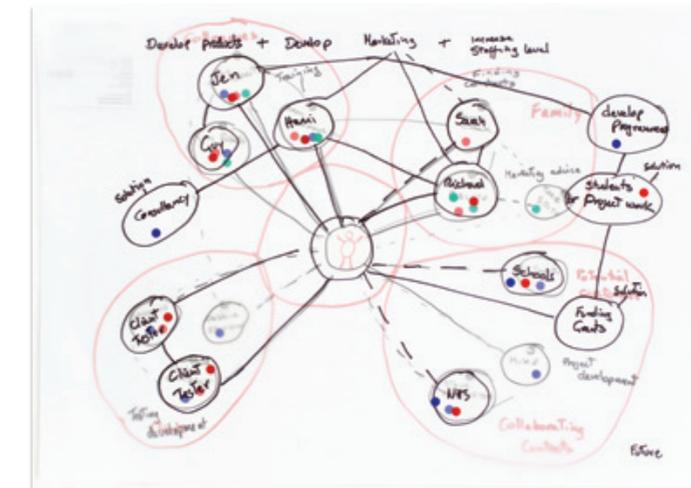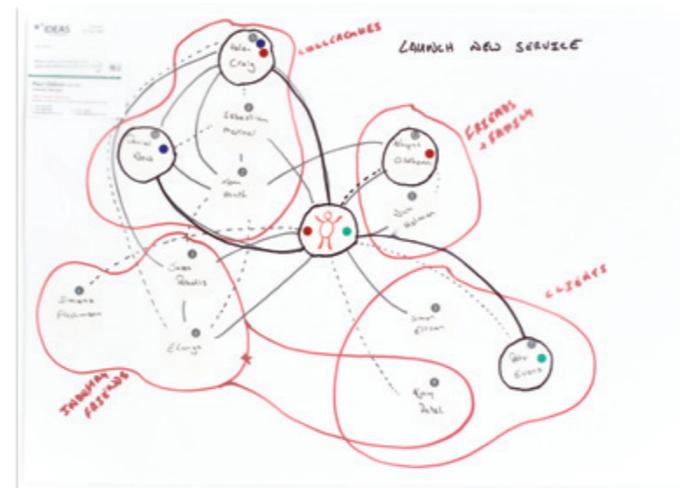
Step 2
Calculating an index of network characteristics

In a further analysis we examined the characteristics of the participant's network more formally.

Based on the outcomes of the formulae calculations (shown right) indices were produced where each characteristic of the entrepreneur's network was positioned on a graph. In addition, the average indices of all the workshop participants were calculated as a reference for each individual entrepreneur. The figure on the opposite page shows the visualisation of the four network characteristics. From this, it can be seen that the overall networks of entrepreneurs, who participated in this workshop, were local and strong. Interestingly, by focusing on two characteristics, i.e. contacts' backgrounds and the network structure, the same networks appear relatively heterogeneous and significantly sparse structured.

This finding is contributing to the current discussion on network studies which commonly describes networks as one big phenomenon without considering the different characteristics of networks.

Geographic distance

Quotient of the number of external (non-local) contacts (*d*) and number of local contacts (*n-d*) of an entrepreneur. The formula is as follows:

$$\left(d - (n - d) \right)/n$$

Strength of relationship

Composite variable derived from frequency of face-to-face interaction (*i*), duration of relationship (*d*), and entrepreneurs' assessment of closeness of the relationship (*c*) with contacts (*n*). The formula is as follows:

$$\left(\frac{\sum_{p=1}^{n} i_p + \sum_{p=1}^{n} d_p + \sum_{p=1}^{n} c_p}{3n} \right)/3$$

Diversity of contacts

Composite variable derived from the proportion of heterogeneous partners among all partners of an entrepreneur (*a_v*) The formula is as follows:

$$\sum_{p=1}^{6} \left(\frac{a_p}{n} \right)^2$$

Overall structure of network

Quotient of the total number of ties of the network relation (*t*) and the total number of contacts (*n*). The formula is as follows:

$$2t/\left(n(n-1) \right)$$

→ Geographic distance

→ Strength of relationship

→ Diversity of contacts

→ Overall structure of network
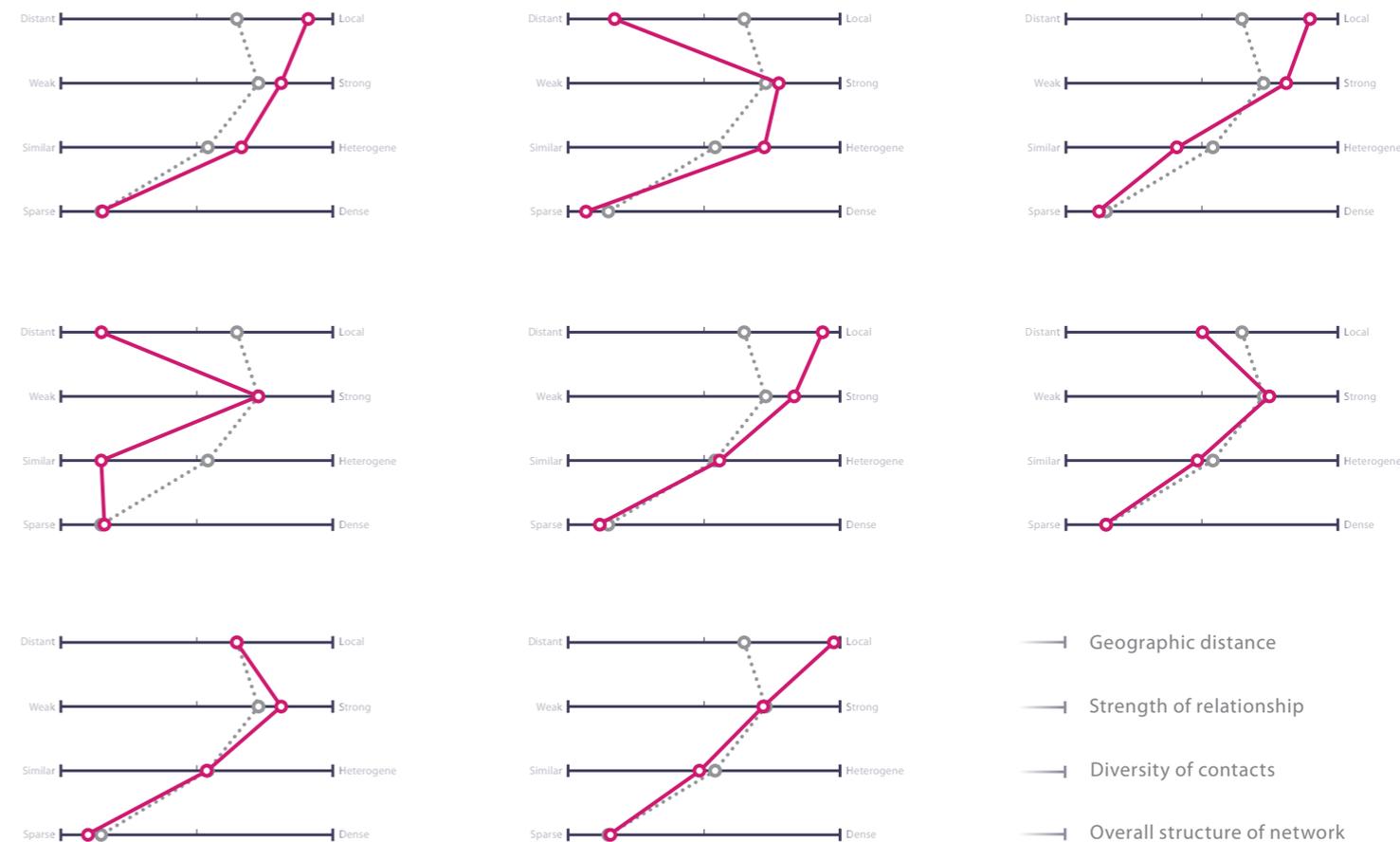
Step 3
Comparing two network characteristics

In the third analysis (opposite, blue) we opposed the frequency of interaction with network contacts to the geographic distance to them. The reason for contrasting these two characteristics was to enable the entrepreneurs to identify strength and weaknesses of their network. As resources are limited, maintaining a relatively distant contact may place an additional burden on entrepreneurs. However, distant contacts are important for developing a new business idea and providing new information and knowledge. On the other hand, although interacting with close contacts will help the entrepreneurs in solving daily business problems, the entrepreneurs must be careful not to be locked in this network and receive redundant knowledge and information.

The last analysis (opposite, yellow) measured the relationship between an entrepreneur's frequency of interaction with contacts and the connectivity between all of the contacts. Again, the analysis aimed at assisting the entrepreneurs in managing their networks. It was highlighted that spending time interacting with contacts that are highly connected may not be beneficial in terms of receiving new information. However, a highly connected network may be beneficial as it offers trust, legitimacy and support for certain issues. Ideally, by reflecting on this analysis, the entrepreneurs would recognise opportunities to extend their network without losing contact with their existing network members.

The Bespoke Report

In the final workshop session each company was presented with their own, bespoke 80-page report (similar in format to this document). One of the key functions of this report was to provide each company with the results of the network analysis undertaken as part of the knowledge exchange pathways approach.

This section used the visualisations described in the preceding pages to bring the analysis to life for the companies. To compliment these we used the analysis as the basis of diagnostic suggestions. This text aimed to help companies translate the analysis into practical understanding and through discussion, both within the company and externally, to have a practical impact on changing the companies operations.

The other important function of the report was to act as a focal point for discussion and communication inside the companies participating in the program. We are conscious that small businesses are not defined by a single perspective but are communities in their own right. Creating a well illustrated, attractive document is intended to pull people from across companies who could not attend events into an engagement with the project delivery.

Project Impact

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On research and business

Case studies of workshop participants

Although this workshop programme only recently concluded and our evaluation is ongoing, in this section we will begin to assess its impact upon the businesses who participated. This is exemplified via a series of case studies from participant businesses over the following pages. However, it is worth noting that the importance of networking to the participant businesses was unanimous throughout, and the demand for this programme clearly highlights the need for this type of support.

Twenty-three new technology businesses participated in the workshop programme, from a range of sectors including Advanced Engineering, Digital and Creative, Health and Business and Professional. The equivalent full time employee average for each participating organisation was 15 people, although the actual number of employees ranged from 1–52. The following case studies are representative of the new technology businesses who attended the programme.

Helen Fogg
....
ERDF Project Manager,
Lancaster University Management School

Colin Barnes Collabor8 Online

Colin Barnes is Director of Collabor8 Online. Based in Manchester, Collabor8 Online provide a project extranet that allows colleagues, teams and companies to work together more efficiently; saving time and reducing costs.

Colin came to the IDEAS at Daresbury workshops to get an idea of how other people were using and developing their networks in order to be able to use this for his own networks. He realised from the workshops that, "*Networks are complex, I didn't realise how complicated my own personal network was and the course has helped me understand a little bit more about how relevant that network is to my business and how I can, perhaps, use it better to achieve business objectives.*"

As part of the first workshop, the concept of 'Nets' was introduced to the delegates, this concept involves each contact having their own role so that when a specific task or problem needs completing the contacts required can be identified and activated to form a 'Net'. Colin expressed that, "*The concept of Nets is great. I didn't recognise the concept of nets in my network, but I do now and I thought it was excellent. You can activate that little net to achieve something or to make it work better for you*".

Colin also spoke of the innovative workshop delivery; "*I have been to similar workshops, sometimes you can get death by PowerPoint. But they gave us a lot of hands-on activities and it helps the ideas go in when you are actually exploring them yourself. That was very useful.*"

Collabor8 Online website:
www.collabor8online.co.uk

Bob Lloyd SimX

Bob Lloyd is CEO of SimX, a software, consultancy and research company specialising in modelling and simulation who have recently moved to new premises in Salford.

Bob has attended previous IDEAS at Daresbury workshops and believes that the *Beyond Networking* series allowed for "*the most immediate benefit*". The focus of "*managing the group of contacts that you have and seeing how you could use that to solve a specific issue*" meant that he could look at real life problems that he has been grappling with in the business for more than the past year. This resulted in him being able to create "*a list of actions that I can go away and do literally this afternoon*".

The network session was "*interactive and much more practical than I anticipated so I could use it to solve a specific business issue*". The IDEAS at Daresbury team have aimed to create a structure to ensure delegates don't feel like they have come out to of a training session, but instead take a more innovative approach. Bob could see this structure taking shape; "*I feel like I have spent most of my time working on the business which is quite unusual for a workshop*".

Cécile Marchant Microfold

Cécile is Director of Microfold, a Warrington-based company, which she set up in 1995 to provide specialist communications for SMEs and large organisations. Having worked for several corporates as well as smaller firms, Cécile feels Microfold is well placed to tackle a wide variety of projects, particularly those with a technical bias and has successfully developed the business by networking.

When Cécile attended the *Beyond Networking* programme, she found that the *Connect* workshop led to a revelation about one of her networks: *"…I realised it was going proactively more in the direction I wanted than I was consciously aware of - which was really useful…"*

The workshops were designed to be hands-on, enabling delegates to become more involved and enhance their learning. As Cécile acknowledged *"It's quite useful to write things down and draw the nets on paper: normally I would have them in my head but you can't always connect things immediately, so once you have the pictures in front of you, it's more obvious."*

The group interaction was really important and, as for many others who attended the workshops, the overall theme of networking took immediate effect, with Cécile managing to generate new leads and in fact gain a client from the programme.

Microfold website:
www.microfold.co.uk

Andy Smith Instrument Science

Andy Smith is Director of Instrument Science, a Crewe-based company, established in 1999 and currently employing 5 full and part-time staff. The company designs and develops a diverse range of scientific instruments to measure stable isotope ratios, trace gas concentration levels and energy expenditure.

Andy originally saw networking as one of those business activities that needed to be done as a means of *"collecting the information and using it after that"*. IDEAS at Daresbury has encouraged Andy to start managing his network to enable him to *"identify the gaps in it and think about the sort of people that would be helpful in developing the business"*.

Whilst completing a communication task during the *Create* workshop, it was the delegation process that really connected with his own business experience. He realised that instead of running the risk of failure due to poor communication, it is important to *"work beside somebody to show them what to do, getting them to show you what they have done and then you understand whether they really can do it."*

Andy has attended various IDEAS at Daresbury workshops and concludes that, *"I can see the improvement over the series of workshops to the point where now the relevance and the crispness of the delivery is more focused on the way we guys in small businesses think. It is less academic in the content and more focused on the business need."*

Instrument Science website:
www.instrumentscience.com

Impact on companies

Through the IDEAS at Daresbury workshop series *Beyond Networking*, Daresbury Innovation Centre has been able to offer workshops to small businesses that have been built around interactive processes to foster engagement with other peers facing similar challenges.

One of the things we have spotted in talking to companies that were on this programme of workshop events is that it has really given them time to think more strategically about what they are doing. Often in business there is a whole load of frenetic activity but the real issue is what value is this creating, and what impact is it creating?

IDEAS at Daresbury has been great to enable people to step out of their business and to look back into their business. To look at ways in which they can then work much more strategically to add value to what they are doing.

Another great feature of the IDEAS at Daresbury workshop series is the delivery of particular tools and techniques to go away with that can be implemented next day or next week to add value - really practical, really pragmatic stuff to help people who are running businesses create more value.

It has been great to see a whole programme come together to address what is such a key need - to exploit opportunities and create value in a market from great ideas.

Dr. Paul Treloar
. . . .
Business Development Manager,
Daresbury SIC

Impact on Research

New Dimensions

An active, reciprocal relationship between business and academic research is not a new phenomena. Most university researchers want their work to have relevance to wider society. Government policy has increasingly (and will continue to) encourage this. Increasingly there is a requirement for research engagement with business and for research to have an impact on wider society. This has given business engagement a significantly higher profile within the university sector, and as a facilitator of this knowledge exchange, business engagement activities are becoming a vital component of research activity.

Going beyond the government impact agenda there are more profound, fundamental benefits for the interaction of business and academic research. Within the IDEAS at Daresbury collaboration we develop new research hypothesises and questions and use engagement with companies as a component of the testing and exploration of these ideas in an action research process that is proving to be very productive in pure research terms in addition to strong positive responses from companies.

We recognise and are promoting the development of a new type of professional who has the skills of a researcher and is equally comfortable working with a business agenda and is able to draw out the considerable benefits of crossing between these areas of endeavour.

Dr. Leon Cruickshank
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Senior Lecturer in Design,
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for the programme

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Conclusion

The IDEAS at Daresbury project, of which the Beyond Networking workshop programme has been just one element, was delivered by a highly innovative collaboration of the universities of Lancaster, Liverpool and Manchester. The project was funded by the North West Development Agency and European Regional Development Fund. I would also like to acknowledge the Science and Technology Facilities Council for their support and provision of office space.

As this project draws to a close it is time to reflect on what a phenomenally exciting and challenging opportunity this programme has been. Working with a diverse range of academics and knowledge exchange professionals from across the partner universities, collocated at Daresbury SIC, has brought together a wealth of knowledge and experience to service the needs of the businesses.

Many of the benefits are only just beginning to emerge, the diversity of skills and knowledge of those involved having provided a rich learning environment for both the business participants and the team itself. Information and research concerned with the knowledge exchange mechanisms developed and delivered, as well as the collaboration itself will continue to be disseminated over the coming months. Knowledge exchange with the businesses will also continue and develop via student and academic interactions and engagement in future funded projects including Knowledge Transfer Partnerships and Innovation Vouchers.

Helen Fogg
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ERDF Project Manager,
Lancaster University Management School

Concluding Remarks

The role of universities as a vital constituent of the innovation system is widely recognised. Our work as part of the IDEAS at Daresbury team illustrates the potential impacts of research dissemination on the new technology based firms located within Daresbury Science and Innovation Campus. The *Beyond Networking* workshops centred on the application of networking and innovation in new technology based firms, utilising newly developed methods and approaches to knowledge exchange. It focused on very high levels of interaction and peer to peer learning between participants, the application of creativity, design and the arts to management theory and highlighted the importance of the close collaborative relationships formed between the participating universities to develop new knowledge exchange mechanisms and research.

IDEAS at Daresbury offers a model for collaborative research and knowledge exchange which may be of interest to other universities, government, policy makers and research councils, as an exemplar of the application of academic research to the real innovation challenges faced by business in the current economic climate.

Prof. Sue Cox
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Dean,
Lancaster University Management School

Concluding Remarks

This workshop series provides a compelling case for the benefits of multidisciplinary collaboration, with mutual benefits for both research and business engagement activity. An experimental approach is taken throughout this workshop series, especially evident is the contribution of design thinking and interaction design. This stimulates interaction and exchange with the knowledge exchange activity.

This approach is exemplified by the *Create* workshop, looking at invention and creativity, this is a model that draws on contributions from across the Arts to great effect. In addition to both traditional and newly created design techniques we also included dance and choreography skills and perspectives as the driver for the Physical Problem solving exercise, the result was a highly innovative, highly risky activity. We were not at all sure that we would get 8 high-tech business owner-managers working together to create and perform a collaborative two minute dance. Through this experiential approach we engaged companies at a fundamental level with collaborative problem solving, creativity and open exploration.

An engagement with the experience of knowledge exchange as a whole is one of the areas we see for further highly productive collaboration between management and design research and between research and business engagement.

Prof. Rachel Cooper
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Co-Director, ImaginationLancaster

Presenter Profiles

Dr. Kurt Allman

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Kurt Allman is a senior member of the Manchester Enterprise Centre, part of Manchester Business School. Kurt has worked with early stage businesses for a decade; having been heavily involved in start-ups activities within the University's hatchery activities. Kurt's focus as part of IDEAS at Daresbury is on supporting the innovative capabilities of small firms and leveraging that through customer insight – a deeper and more profound understanding of customer needs – now and in the future. He is also interested in helping SMEs challenge conventional business models through detailed exploration of their value proposition.

Dr. Leon Cruickshank

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Leon is interested in the design of knowledge exchange and how design thinking can be used to help companies communicate, collaborate and innovate more effectively. He is an IDEAS at Daresbury board member and their Director of Research who works with SMEs in addition to publishing widely on design knowledge exchange and innovation.

Helen Fogg

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Helen is the project manager for the IDEAS at Daresbury programme. Previously Helen has managed a number of large scale projects, for the Institute for Entrepreneurship and Enterprise Development (IEED) at Lancaster University Management School, funded by the European Regional Development Fund and Northwest Development Agency, engaging with SMEs and collaborating with various academic institutions. She has developed a suite of demand-led business support programmes for regional SMEs across a range of sectors particularly the financial and professional services sector and innovative and high-tech organisations.

Lorenz Herfurth

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Lorenz joined Imagination Lancaster as a Research Associate in 2009 after graduating in Design Management and Policy. He has a background in industrial design and worked for the transportation industry for several years. His research interest is centred around internal networks. The use of design approaches to facilitate participation in decision-making processes is one of his core interests.

Prof. Jeremy Howells

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Jeremy is Executive Director of the Manchester Institute of Innovation Research (MIoIR) and Head of the Innovation, Enterprise and Strategy (IES) Division at Manchester Business School in the University of Manchester. His current research interests centre on R&D outsourcing and offshoring, actors and innovation systems, industry-academic links and knowledge exchange and service innovation. He is also Executive Director of the IDEAS at Daresbury.

Tim Jones

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Tim Jones has a background in new product development for small- and medium-sized businesses. He has managed a prototype development consultancy and has 20 years experience of helping companies undertake innovative changes to their products. Tim is Head of Undergraduate Studies at Manchester Enterprise Centre and has a postgraduate degree in Manufacturing Management and Technology. He is particularly interested in the process of identifying problems and creating new opportunities for organisations and has extensive experience of incubation and mentoring start-up businesses.

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Alison joined the University of Liverpool in November 2009 as Innovation Associate for the IDEAS at Daresbury project. Her role is to coordinate the delivery of the University of Liverpool's contribution, but also to support delivery of the wider project. Alison originally studied biological sciences, with a particular emphasis on genetics, biotechnology and biomedicine, and worked in a North West Cancer Research Fund lab for her dissertation project. She went on to study management, and is interested in knowledge exchange between primary research and business, particularly in terms of driving innovation and new capabilities into SMEs.

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Al Mather is Head of Development at the Institute of Entrepreneurship and Enterprise Development, Lancaster University Management School. She is also Deputy Director of IDEAS at Daresbury. Previously working in business development and consultancy in the private sector, Al is interested in the research and practice of entrepreneurship and innovation.

Marzia Mortati

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Marzia is a visiting PhD student with ImaginationLancaster since 2009. She is doing her PhD on the subject of Collaborative Networks of SMEs, communities of practice and innovation. She looks at the role of design in these topics and its links with creativity, invention and innovation. The main aim of her PhD research is to identify how designers and design research can have a role in fostering innovation through networking, developing tools that - by design - can help SMEs benefiting from the openness provided by a knowledge economy.

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After a Doctorate and a Masters degree in technology and innovation management at Cambridge University, Noordin led and conducted a number of industry-based applied research and consultancy programmes. He has been immersed in assisting numerous innovation-led businesses from industry sectors ranging from consumer electronics and software to automotive and advanced engineering. Until recently Noordin was a Visiting Professor with the Government of Malaysia. He is Director of the Innovation Academy at the University of Liverpool's Management School.

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Danny recently joined the IDEAS at Daresbury project as a Research Associate for Lancaster University Management School. Danny is involved in developing an evaluation framework for the project as well as delivery and dissemination.

Danny was recently awarded his PhD in Economics of Innovation from Delft University of Technology entitled: Academic entrepreneurship and different networks of configuration.

Danny is interested in academic entrepreneurship and social networks and is currently researching incubation processes and knowledge commercialisation.

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ImaginationLancaster is an open and exploratory research lab that investigates emerging issues, technologies and practices to advance knowledge and develop solutions that contribute to the common good. Linking across discipline boundaries and enabling interdisciplinary research, the Lab uses innovative research strategies combining traditional science, social science methods and practice based research which arises from the arts. It was recently placed in the top 3 nationally for Art and Design research in the recent Research Assessment Exercise.

Lancaster University Management School

› www.lums.lancs.ac.uk

LUMS is a triple-accredited, world-ranked management school, consistently among the UK's top five. Almost uniquely among leading business schools, Lancaster combines excellence in research with a student-centred campus, and a full spectrum of undergraduate, postgraduate, PhD and executive programmes. Leadership programmes for multinational companies and outreach provision for SMEs are of equal importance to their mission.

University of Liverpool Management School

› www.liv.ac.uk/management

The School's ethos is to deliver an impact in 'Learning to make a Difference', a philosophy which is at the very heart of everything they do. The University of Liverpool Management School (ULMS) is a vibrant, multi- and inter-disciplinary environment that delivers innovation and originality of thought. The Financial Times ranks The University of Liverpool in the top 10 UK universities in terms of annual research income with ULMS securing millions in research income in recent years.

University of Manchester Business School

› www.mbs.ac.uk

Manchester Business School is the largest campus-based business and management school in the UK. They provide world-class business and management education and training to undergraduates, postgraduates, experienced practitioners, and those with serious academic and research ambitions. They are an international and progressive school, delivering and applying original business thinking and teaching, informed by the contemporary commercial environment.

Funding Bodies

Northwest Regional Development Agency

The NWDA's core purpose is to maximise the region's competitiveness to build a stronger economy. Competitiveness is the key to England's Northwest economic success – the essential element in the development of our region's businesses, its people and its places. They work to maximise the region's competitiveness, delivering effective responses to both short-term challenges and longer-term opportunities.

European Regional Development Fund

The ERDF programme allocates funding to different regions throughout the European Union to boost economic development in less prosperous areas. In the UK, the Government has given its nine Regional Development Agencies responsibility for managing the funding, which means that European Union regional policy can be aligned with UK domestic regional policy. In the Northwest, the Northwest Regional Development Agency (NWDA) is responsible for managing the ERDF programme.

Science and Technology Facilities Council

The STFC make strategic investments to support world leading science and technology for the UK. These investments include large scientific facilities used across the research base. Their vision is to maximise the impact of their knowledge, skills, facilities and resources for the benefit of the United Kingdom and its people.