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SKU: 9781119379454-SOLUTIONS

Case Study: Eastville Community Shop

Eastville is a small village in the south west part of England. It is a mixed community with a significant number of older people who have retired to the pleasant countryside living alongside young families who have moved there because of its proximity to the town of Moreton which offers many employment opportunities. Around 400 people live in the village and surrounding farms and in terms of facilities there is a church in the centre, two pubs, a filling station/car repair shop, a branch surgery where the local doctor attends on certain days and a small kindergarten.

Until a couple of years ago the village also had a Post Office, a small branch facility which offered a range of services beyond postal activities including payment of pensions, licensing, passport applications and currency exchange. Being in the centre of the village and visited by many people during the day it also provided a useful point for purchasing a small number of essential items like bread, milk and newspapers. It was largely a one-woman operation and received a subsidy from the national Post Office which has a policy of retaining facilities in rural areas to provide a service even if the actual operation is not financially viable because of the small customer base.

From the point of view of the village this was a valuable facility. Not only did it offer a range of services but it also provided a focal point for the community. It was somewhere where people could meet and exchange views and news, somewhere where notices could be displayed and information shared around the village. So it was with some concern that villagers heard that the woman running it wanted to retire; since there was no one else to take on the Post Office there was a risk that the whole thing would close.

Plenty of discussion followed and a number of people expressed the view that there was a real need for some way to continue the idea of a community shop. Eventually a group of active residents met in the local pub and out of that came a small group who agreed to explore possible options further. In particular there were three characters who played a major role in developing the ideas which eventually led to setting up an alternative community shop, one which is still operating today. They are:

James – a successful businessman who owns a large house in the village and has played a central role in many community projects. He brings considerable business skills and experience in some of the key aspects involved in setting up a business like project management, finance and legal affairs.

Sarah – a pillar of the local community who has lived in the village for eighteen years and been involved in organizing a variety of projects. Still active in local politics she has been a core member of the national Green Party ad although

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retired from that now is still very committed to their ideals. She is an experienced organizer and initiator of social ventures.

Anne – a former schoolteacher who lives with her family in the village and who moved there because of the sense of community. She has been a willing volunteer, contributing energy and enthusiasm wherever needed to help bring the village shop to life.

Let's look at the story in the words of, and through the eyes of, these three people:

Jane: 'OK well – I think it was 2005 .....Joan, the postmistress in the village, had been very central to life in the village... although it was not a shop, it was just a post office where she sold newspapers and stationery...but the space in the post office was very central to an awful lot of things which went on in the village, to the whole community.

And when Joan announced that she was retiring when she reached 60, and she put the PO business on the market (with her house as a separate sale) - well, pretty much everyone in the village was a little anxious. We knew that you don't make money out of running village post offices and their future then was not looking rosy..... I think Joan had to top up her income through selling other things, newspapers and stationery. So it was a real threat to the community but we just waited to see what would happen; unfortunately nothing happened and nobody was interested, time went on and it was getting closer and closer to the time when Joan wanted to retire. Then one day she decided that she wouldn't sell the Post Office as a business, she would just sell her house. And then when she put her house on the market –that was when millions of alarm bells rang as we realized we could lose the whole thing very quickly.

So a group of us had a few meetings in the pub and talked with others about different ideas. Like setting up something like a trading post which would be where people could buy in bulk, or where parcels could be dropped off or some other central place in the village which would replace some of the functions of Joan's enterprise – but without the post office.

I can't quite remember how we actually got to thinking that maybe we should buy it, but there were several meetings where we were exploring options and it probably came out of one of those. Having come up with that idea we put round a questionnaire to see if people would support a village purchase and we got a very positive feedback. We called a meeting in the Parish Hall and a number of people were supportive and said they would be supportive financially, and we thought we could also explore grants and things. But we ended up discovering that there were very few sources of money to buy an asset; if you already had a building or space or you owned something, then you could get grants to refurbish or extend that but you couldn't get money to buy a new asset. That

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stumped us for a bit but then someone came up with the idea of the National Lottery and we began to explore that option.

At the same time other people were visiting other community organizations, for example a village in Suffolk where the community had taken over the post office. That gave us the idea that a Community Shop might be possible and one of our core group (James) had worked for an organization supporting communities developing projects, so he knew a lot about this. So it began to seem that there was a lot of expertise, a lot of knowledge in the village that we could tap, and there was a lot of support.

It wasn't easy at first - there were a few people who said it wasn't financially viable, we had once had a shop in the village square which sold basic items but that had closed down because the couple who ran it couldn't make a living. But we soldiered on because there was a core of people who were enthusiastic. I think there is a need to have more than one or two people doing this sort of thing.

Our first break came when we discovered we could get money from the National Lottery to buy an asset if it was linked to a community project and if it had very obvious community functions. We thought we'd apply for this but there was a requirement that if you got money from the National Lottery you had to raise some funds yourself. So we had to raise something like £30, 000 ourselves and to do that we had to embark on a whole range of fund raising activities. In situations like this you need a community which puts its money where its mouth is and they did! We had around £16k of loans from people in the village, some of whom were only able to commit a small amount like fifty pounds. This was amazing since there was a risk - they were all unsecured loans and we couldn't guarantee they'd get their money back.

With this support we were able to get the money from the National Lottery which enabled us to buy the bit of Joan's house which was the Post Office and she decided to stay living in her house and helped a lot in the early stages by carrying on after her retirement to help keep it going. The national Post Office paid to employ a new sub postmaster and they trained him and we had enough money to also pay for a part-time shop assistant for the first 3 years. This gave us a breathing space; a way to build up the business to the point where we could generate enough income to pay wages ourselves.

But we also realized it couldn't just be a Post Office; we needed to pull people in by what we sold in the shop and so we chased other funding to help refurbish and extend. Sarah and James got busy again and applied for additional money for this; that took about 18 months and we took out a loan which needed paying back at around £500/month – that was quite scary! We started off in a small way – I went and bought stuff from a warehouse to fill out the shelves. At the

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same time we ran a questionnaire survey to find out what people wanted the shop to do, what would make people come?

It took off slowly but with the support of the village the loan was repaid last year, and the other loans from the community are now all repaid as well. Some people even said 'we don't want it back' – that was brilliant; the bottom line is that as of last year we're now entirely debt free. Now we're trying to maintain what we've gained and change the nature of what we've got to keep people interested and supporting us – without that it will never pay for itself.

The shop was set up as an Industrial and Provident Society, a not for profit business. To all intents and purposes the village owns the shop and any profits that we make go back into the village. So, for example, at the Jubilee party the shop provided all the teas (£210 of tea and coffee); it's kind of there, generating some money, so people do know that if they spend money in the shop it will go back into the village. Now our Treasurer is working on changing the tax basis so that all the profits go back into the community.

Over time there's been a lot of involvement, mostly from volunteers. Both of the people who work in the shop do much more than they are ever paid for but the shop wouldn't run if there wasn't quite a large number of volunteers working – for example delivering newspapers. When we did the refurbishing and building people put in their time for free; for example an architect, a painter and decorator all gave their services for free and led the rest of a group of volunteers. And that's fun, we had a painting party. We limped along for the first year but then it got better.

So what you've got is a whole community pulling together, pretty much and that's the kind of story of Eastville really. There is a history of a lot of community projects, lots of clubs and activities – we have Women's Institute, an old peoples club, a flower show, a twinning with a French village, and so on. I chose to move to Eastville partly because of the amount of community activity which was already here. But it's important to remember how crucially those things depend on an individual or a couple of individuals; once those people move out it dies for a while but hopefully it picks up again in a different form.

It's a real centre of the web of village life and that's the important thing, not just the services it provides. When I got involved in the first place I didn't need it, nor did James or Linda; we have cars, we could always go shopping in Moreton where it's cheaper and there's more choice. But we always had the vision that it would be a centre, more than a village shop.... one of these lovely places where people come, sit around, have coffee and chat. We imagined all sorts of things ...maybe an internet access point...training for the elderly who were frightened of the internet and that sort of thing. And we wanted it to sell mainly local foods, as many local things as we could - but of course when you sit around and have a vision you're being idealistic and we've learned to compromise on some of this.

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Still our main dream was to help make it a village centre, we wanted it to be a hub and it does work as that now.

It's doing really well, we're bursting at the seams now, but there's a need for others to get involved. We're (James, Sarah and I) spent - it does take up a lot of emotional energy. It still needs to grow but not too big – and it needs new people to take it forward….

Why did you get involved….?

It just was a need for the village – and I've always believed that if something is to be done then I should do something about it…I need a lot of things to do, I don't sit around,…the concept of being bored I can't relate to that…I never get up in the morning and think 'what shall I do today'! …I like being busy, I like doing things, and I feel that because of all I've spent my life doing – in special education I ran a support centre …I always had some responsibility…I do feel responsible, I think, for what happens to me in my life. I don't feel that things are done to me, I feel I can do things…so I think it's a combination. I enjoy doing things with other people…I find it very exciting sitting around and talking about ideas…. I need some stimulating which is a challenge – once I'm in something it's important to stay committed to it…that's been to my detriment sometimes…but I'm not very good at putting myself first. That partly comes from being a Mum…and being a female…also because I don't feel that I'm the most important thing in the world…it's the old thing that 'its better to give than receive'…that is a very strong part of what motivates me…I'd rather give things away …I don't like people giving things to me….

Linda: If I tell you my story, it probably begins in Liverpool where I joined the Green Party where some members including myself set up a green shop. It was a worker co-operative; we didn't all work for money, we had other jobs but that was good experience. And I think that's where my background plays a role in the Community Shop story – my being in the Green Party and being very aware of green issues, climate change, how we ought to live. Things like local shops, local food are very important to me; I've been on the Parish Council for many years and we had a parish plan which I played a big part in. One of the things we wanted to do was set up some affordable housing… we tried to get together a group of people representing all different shades of the population.,. to form a local trust to help make this happen. We also had the idea of a shop but didn't really think that was a high priority at that time, though we did look into it. At the time we thought it wasn't going to be viable, wasn't going to be sustainable but we had looked at the idea. So when Joan said she wanted to retire and the Post Office looked like it was going to close we had this sort of group that wanted to do something about that.

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We found the PO premises were for sale and we thought 'we must save the PO …and we could have a shop as well…and the postmaster could have his salary from the PO so it would make the shop viable because we could just pay someone for their role on top of the PO…. So we began to imagine the possibilities, thought about what we could do. The big thing was to negotiate with the people who owned the premises and who wanted to sell the PO and the accommodation above it…..eventually we persuaded them that we could just buy the PO part and some land and the price for that would be sufficient for them to stay in their house. We came to an arrangement and then we had to start getting the money; we applied for a National Lottery grant …James was good at that because he had experience and I had experience as well because I had applied for a couple of other projects in previous years - the Millennium Green and also for a path to Moreton and both were successful. I think perhaps that gave us encouragement because we had done other things and we knew it was possible if we had the will.

Once we had the basic funding it was all go, appointing a PO manager, doing lots of works ourselves on the shop…we had a tame architect, someone who also has very green ideas and we worked with him on making the building as eco-friendly as we could – for example the paint was special eco-friendly, and we got natural floor covering, and we used second hand wood and a local carpenter, second hand slate for the counter. And of course there was double-glazing and the roof was well insulated.., and we also later on applied for a grant for solar panels…and we managed to get two grants for those! When we interviewed for the person to run the shop we were very keen to hear what they had to say about using local produce and that sort of thing.

I think an important aspect of our shop is that we try to have something for everybody…getting the local community involved was so important for getting the grant…people did all sorts of fundraising.., and there were loans and gifts…amazing actually the amount of money which we raised quite quickly in the community…

You have to believe that it will happen. I think it helped that we'd done that project with the Millennium Green in the past… it was the same thing in that project, I remember people saying at the meetings we organized that 'you'll never get it to happen'– it helps sometimes to be obstinate and believe! And there was also the threat of losing something (the old Post Office) which mattered in the village …perhaps you need that to spur you on, I think a lot of people needed that, they joined the group, donated money, to save the PO rather than promote the shop….

Have you always been active in community life like this?

It didn't start until I was in my forties actually…I always thought political thoughts but I was busy teaching, raising children, studying …I suppose I have got a track

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record for getting involved, helping get things started – for example, there's another project starting in Moreton which is to save the bookshop and make it into a community bookshop…I went to the first meeting and was able to tell some of our experiences…I did say I couldn't get too involved in that because I have too many other things on…but they asked me to be an advisor…

It's interesting psychologically, you wonder sometimes why you do all these things… maybe it's to make you feel that you have some sort of value…I think perhaps without the projects I would have much lower self-esteem… Sometimes you think about your funeral and I'd like to think they'll be able to say that she did all these things…I like to think I have done something with my life….

And it is very pleasing…I still volunteer on Sundays sometimes and enjoy doing that… and the Millennium Green when people say how lovely it is and how they enjoy it…it is very pleasing…you don't need money for these things do you?

James: For me it was fairly straightforward, there was clearly a need to do something otherwise the village would lose a piece of its heart. I remember having the conversation with various people in the pub and on Saturday mornings walking the dog, and it became clear there was a lot of interest and concern. So we needed to channel and organize this and I set up a meeting in the pub for anyone interested. We had seven or eight people and we discussed options and a few of us – Anne in particular, she's always up for this kind of thing – agreed to explore it further. We did some research on other places which had set up community shops and I looked at the various legal formats we might need so that the whole village would own the shop, all the profits would go back to the village, etc.

Fund-raising was a big thing – once Id done some basic numbers on what this was likely to cost we knew we'd have to raise quite a bit ourselves. The Lottery and other grant funding is a good route but you have to show the community is behind the project and usually that means raising half the money yourselves. We had various meetings and a lot of people turned their commitment t the idea into practical support through a series of small loans – some didn't have much to pledge but others were very generous. Anyway it started out as something the village clearly wanted because they were prepared to support it, not just with words but putting some cash into what was still a risky venture – we could have failed completely.

Linda and Anne were amazing, running round and mobilizing the village, organizing meetings and raising support, lots of small events like coffee mornings to help raise funds. I could bring a lot of project management skills because that's what I do in my day job – setting this up from the legal and financial side of things is pretty much like any business venture. The good news was that we succeeded so the project had the money – all we need to do then was to make it happen! We managed to buy the old Post Office building and had

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some money (and a lot of volunteer labour and gifts of materials) to set it up and we found someone to run it who was committed to the whole idea. It's the old thing of chasing resources from wherever you can find them and we were very lucky.

People began to use the shop, even those who didn't need to because they could travel to Moreton – they chose to support the shop even if the things were a little more expensive. It meant that the shop became a part of village life and everyone supported it because it was 'their' shop. The good news was that we made enough money to repay the loans to everyone who committed their money and to make enough surplus to keep improving things. It's now on a good footing, financially and legally, and that has meant that those of us who started it can hand it over to others to run. It takes a lot of time and energy, I don't mind, I enjoy it but you can't keep doing that forever. There are other things I'd like to do in the village and anyway I'm not sure it's good for the same people to keep at the centre, the thing needs to have a life of its own…

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Case Study: Liberty Global

Liberty Global is the world's largest supplier of media services – known to nearly 30 million customers as the provider of TV, entertainment, voice and broadband services in 56 million homes. 45,000 employees around the world support its delivery via brands like Virgin Media; its footprint extends around the globe in 14 countries. And it's a successful business; turnover in 2015 was around $19billion.

But success – particularly in a highly competitive world like media and broadband – does not come by accident or acquisition. Innovation is critical – and across a broad frontier. Developing new products and services and improving and supporting existing ones, opening up new markets with configurations suited to local needs, understanding the user experience and feeding that into future development are all key activities. And to do this efficiently and effectively requires extensive process innovation, constantly changing the way the company's offerings are created and delivered. Mastering new technologies and quickly harnessing them to help deliver reliably

Innovation on this scale can't remain the province of a small group of R&D or marketing specialists; it needs to be something delivered on a company-wide basis. High involvement innovation of this kind needs a culture in which each employee recognises the contribution they are expected to make and feels supported and enabled to deliver on that.

A good example of the way this is achieved is the 'Spark' programme which was initially launched in 2011 in The Netherlands as a platform-based system involving around 1500 employees. By the end of 2012 it had been rolled out to a further four countries and was successful in attracting a high level of ideas. However the project manager, Roel de Vries recognised that it had a number of shortcomings which could be improved upon – in particular:

- Ideas were not aligned with company strategy
- Ideas were not linked to specific challenges, targets or timeframes resulting in high volume of ideas with no clear connection to business needs
- Lack of ownership of ideas so no vehicle for downstream implementation
- Lack of standardized process for managing the flow of ideas into innovation
- At an operating level different platforms were being used to support the programme in different locations, preventing international co-operation and idea sharing across the wider business

He worked on the launch of Spark 2.0, building it around key Strategic Innovation Areas (SIAs) within Liberty Global. Each SIA had a high level sponsor responsible for that area of the business; the idea was that SIAs would provide a steady feed

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of new ideas into those business areas via a series of time-limited campaigns. This mechanism was designed to ensure a degree of policy deployment, linking employee ideas to company strategic goals and timeframes.

The twin goals of the Spark platform are to provide a central hub for submission and tracking of ideas from whatever sources and to enable cross-functional collaboration, including spreading ideas from one business or geographical area to others As of 2016, Spark had reached over 20,000 employees, generated over 14,000 ideas, with nearly 1,000 of those implemented, and realized a return of €10m. Participation levels run at around 40% with some countries – e.g. Ireland with 44% - running even higher. Spark originated in Europe but has now been extended to 14 countries including some in Latin America. An important intangible outcome is that there seems to be a higher level of engagement (as measured by 'Zoom', the company's annual employee survey) amongst those who have participated in the programme.

Spark operates via idea campaigns which are initiated by a sponsor – typically a department or business manager with a business need and the budget or resources to enable implementation. Each campaign follows the same structure:

1. Initial phase of idea submission, community discussion and grading and then expert reviewing
2. Concept phase in which selected ideas are further developed and reviewed
3. Final approval and handover back to the business for implementation

Campaigns are facilitated by a local Innovation Manager linked with the central Spark team; this provides a channel for the Spark team to learn and improve the overall system. Campaigns can be time and topic focused or 'always open' – i.e. a campaign which invites a wider spectrum of ideas. These campaigns have an additional process stage for categorizing submitted ideas and assigning them to relevant departments for evaluation. In general the experience at LG has been that focused idea campaigns aligned to particular strategic challenges tend to lead to more, higher quality ideas and better implementation rates.

To maintain momentum the Spark team have developed a variety of reward and recognition options. Each campaign has winners who are recognized by the business unit sponsoring the campaign; in addition country-level winners are also recognized and these winners attend the Liberty Global Technology Summit in Amsterdam, sponsored by the CTO. In addition to formal recognition of their contribution there is a range of prizes including a fully-paid city trip for winners and their families.

Spark is supported by a full-time team of two based in Amsterdam; in addition an Innovation Network Manager is appointed in each country. They spend a portion of their regular day job on facilitating and marketing idea campaigns. In

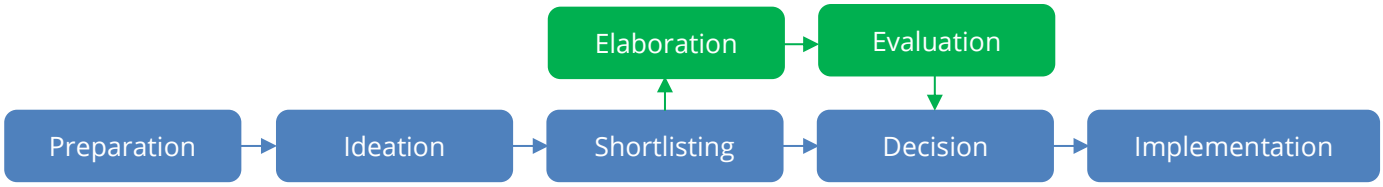
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total, around 30 people are involved in running the Spark programmes and funding comes from the Technology & Innovation group within Liberty Global.

Experience with running the programme over several years has provided a number of insights around developing and strengthening it. These include providing a module within the platform which integrates trend scouting into key potential areas for strategic development of the business, an intellectual property rights (IPR) process step to handle potentially patentable ideas and an open innovation option which might allow the company to bringing in customer views and engagement.

The Spark process



In more detail the process works as follows:

- Idea campaigns begin with three weeks of ideation, followed by one week of focused collaboration to enrich ideas.
- Ideas which meet a certain level of community activity automatically move into 'HOT' status. The levels can be adjusted per campaign depending upon audience size, topic difficulty, etc.
- HOT status criteria can include aspects such as the number of views, likes, and comments.
- Ideas which reach HOT status are then subjected to management review.
- Ideas which make it through review are then developed further by the author to prepare them for a decision meeting.
- The decision meeting (Spark Pit) is similar in format to the "Dragons' Den", where managers receive a pitch from the submitting team and then decide on the next steps for selected ideas. Prior to this stage, the Spark team will provide guidance on how to pitch and shape an idea for a management audience.
- The sponsor, who is responsible for implementing them, owns selected ideas from campaigns.
- The Spark team continues to check on idea progress so that tracking is maintained within the platform.
- Ideas which come in via the always-open campaigns are handled by the Spark team and regional innovation network managers.
- They are collected in batches, grouped according to SIAs, and sent out to evaluators at regular intervals.
- Feedback received from the reviews determines whether the idea proceeds.

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- On a monthly basis, a reporting deck is compiled by the Spark team and distributed to management. It includes employee engagement over time, and ideation activity over time; these metrics are also grouped by Liberty Global divisions, so that each area of the company can be measured individually. Activity reports show how Spark engages employees, and highlights where additional promotions are needed.
- The report also highlights 'Ideas of the Month', which are manually picked by the Spark team for their interesting nature, or high collaboration activity.
- Tracking ROI shows how Spark influences the bottom line, helping to convince senior management of its value.

Matchbox

Experience with Spark highlighted the need to support the development of high involvement innovation with other mechanisms, many working in 'off-line' mode to complement the online platform. One good example is the Matchbox programme.

Following the success and high (40% plus) involvement of Spark the team began to explore other ways of bringing innovation into the mainstream of the company. One approach was the addition of a training element designed to teach innovation methods/entrepreneurial skills to participants to enable them to develop their ideas more fully. Based on a concept originally developed in Adobe Systems (the Kickbox) Liberty Global's 'Matchbox' approach equips staff with entrepreneurial skills using methods like 'lean start-up'. Part of the underlying motivation was to move beyond suggestions for continuous improvement and to tap into 'breakthrough thinking' across the workforce, inviting them to challenge the status quo and 'think like a competitor'.

It was piloted in Ireland over a two-month period and 50 participants were selected on the basis of their motivation. A 'teaser' campaign ran for 2 weeks, based on posters appearing around the workplace posed questions like 'Have you got what it takes?' and other challenges. From the outset the branding was aligned with Spark, using metaphors around starting fires. This was followed by a second round giving more information; as the aims of Matchbox became clearer so potential participants were invited to submit expressions of interest, saying why they wanted to join the programme. They used the Spark platform but instead of submitting ideas they offered a 100-word expression of motivation.

The response was impressive; 18% of the workforce registered their interest and others wanted to join but had missed the closing date. Selection of participants was a challenge since the organizers did not want to 'switch off' unsuccessful applicants. The model used was a live lottery draw and the game element was continued with invitations to those selected appearing in the form of a 'Golden

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ticket' similar to that in the 'Willy Wonka ' story and film. This reinforced the theme running through the campaign of 'do you want to be part of something special?' and gave a sense of selection being an important achievement and not simply an opportunity to join another training programme.

On arrival at the first meeting participants were given a green 'Matchbox' – a box containing a variety of resources including tools and guidance on shaping the pitching of their ideas, as well as money and time to invest on prototyping the concept. This included a credit card pre-loaded with a budget amount, and a voucher entitling them to tome (equivalent to half a day per week) to work on their ideas. These were powerful symbols of empowerment and another indicator of the 'different' nature of the programme.

A mixture of interactive exercises and training inputs was built around the contents, giving participants a sense of being equipped for the challenge they were about to undertake of developing and eventually pitching their innovative ideas. They were given presentations by successful entrepreneurs (from outside the company) to inspire them and give them a sense of key skills needed to take ideas forward. An important element in the workshop was the development of a cross-functional community, sharing ideas amongst people who might never have talked with each other under 'normal' conditions. This community was given online space within the Spark platform and have been able to use it to offer advice and support throughout the programme and beyond.

Following the inception workshop participants spent time developing their ideas further using lean start-up approaches around minimum viable product and customer validation of prototypes. They had access to expertise and also an allowance of time and budget to spend on the project (via the credit card and vouchers given to them in their Matchbox).

The developed ideas were then reviewed and a small number (15) pitched to a team of senior managers in a format based on the TV series 'Dragon's Den', christened 'Spark Pit'. The purpose here, as in the original TV programme, was for them to make short pitches and then be questioned by the 'Dragons'; success would mean further investment and support from the company to move those ideas into implementation. Of the 15 pitched 8 went on to receive such support and the overall sense from the senior management was of pleasant surprise at the quality of ideas pitched as well as the clear entrepreneurial motivation of the participants.

Funding and support for Matchbox came from the internal Liberty Global Ventures team so the programme could be seen as something of an internal experiment. Significantly the financial commitment embodied in the credit cards was not heavily used; the real investment lay in giving people time to work on their ideas.

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TLC programme

In parallel with Matchbox the Irish company has begun developing a new initiative linked to their evolving approach to employee learning and development. The core aim is to shift from training to skills development – as they put it moving 'from course to resources'. They are now providing access to a wide range of over 600 learning courses through the Open University, inviting employees to study whatever they wish to in order to develop themselves. They have also given employees access to the world's largest online business book repository and they can download and explore interesting abstracts of thousands of resources. If a particular abstract receives a lot of hits then employees can get their managers to buy the book and so construct a 'company library'.

Another element – this time a spin-off from Matchbox – is a module, which the team have developed around creativity. This is designed as a fun way of giving people small-scale exposure to the excitement, tools and techniques within Matchbox – a pilot which gives them some insights into how to shape and take their ideas forward. The aim is to give people familiarity and confidence in key concepts before joining the Matchbox programme.

Other innovation activities complementary to Spark

Importantly Spark is not seen as a stand-alone online innovation activity but as part of a wider suite of tools designed to empower and enable employee engagement in innovation. Other resources include the "Wild fire Club" for innovation advocates, innovation spaces where employees can participate in workshops, and a partnership with a local university to spark disruptive product innovation.

Spark Innovation Lab

For the more disruptive innovation, Liberty Global works together with the Technical University in Delft. Master's students work for 20 weeks in the Spark Innovation Lab – an open and inspirational space at a central location in the headquarters in Amsterdam. The assignment the students work on is based on a future need from the business, and results in the presentation of a validated prototype. Besides the value coming from these prototypes, just the presence of the lab helps to promote and embed the notion of Spark within the company, and provides a collaborative space for anybody to work on innovation.

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Case Study: M-PESA

M-PESA is a mobile payments system originally developed in Kenya which effectively offers a banking system based on mobile phones. Launched in 2007 it is now used by 1.7 million people and estimates suggest that around 25% of the country's gross national product flows through the system. The name comes from the Swahili *pesa* meaning money and the original idea began as a development aid project to enable microfinance repayments. Vodafone, via its local operator Safaricom, became the project partner and rolled out the service. Currently (2013) around 16 million people have M-PESA accounts and the system processes more payments than Western Union does across its entire global network.

The system is simple in concept; users pay money in to one of 40,000 M-PESA agents (who usually operate in small corner shops) who sell airtime on the Safaricom network. Withdrawals can be made by visiting another agent and the system can also be used to send money to other people via a simple menu on the phone. Many people work in cities but send money back to relatives in their home villages and M-PESA allows them to do this safely without the risks of robbery or the inconvenience of having to make the journey. One of the emergent benefits was that during the 2008 post4election violence people began to see M-PESA as a safer place to store their money than mainstream banks.

The basic M-PESA service allows users to:

- Deposit and withdraw money
- Transfer money to other users and non4users
- Pay bills
- Purchase airtime
- Transfer money between the service and a bank account (in some markets)

and the service is funded by a small commission fee for each transaction. (The cumulative effect is large though; estimates suggest that M-PESA accounts for over 10% of Safaricom's annual revenue). There is a cap on transactions of $500 making it difficult for money laundering or other applications. the average transaction size is around US$33, but Vodafone has stated that half the transactions are for a value of less than US$10.

In practice this means that carrying out business becomes much easier, contributing to increased productivity. For example a transport company can now pay their crews, and transfer money to and from customers using their service. If a lorry breaks down, they no longer needs to go to the bank, and then travel miles by bus to reach the stricken vehicle. Instead they can arrange the services needed and pay for them using M-PESA.

A key to the success of M-PESA is that it benefits from what are called 'network effects'.

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The system only works when enough people use it but once the word of mouth recommendations reached a critical number of subscribers the system became viable and then new uses were found for the platform. It now offers a gateway to loans, salary payments and bill payments – effectively offering a banking system for the traditionally unbanked. This is important in the context of a country where 80% of the population do not have access to the traditional banking system. There are significantly more M-PESA outlets than ATMs, for example.

Soon after the system was launched it was attracting new subscribers at the rate of 12,000/day, quickly building a critical mass for network effects to operate.

The effects on productivity on people who would otherwise spend a lot of their time carrying out multiple journeys, queuing and other activities have been significant and evidence suggests that the effect has also been to raise household incomes by between 5 and 30%. Many start4up businesses have emerged running across the M-PESA platform.

The model has begun to diffuse to other countries – for example Tanzania (where there are now 5m subscribers), Afghanistan and India. An organization set up by the GSM Association (representing mobile phone operators, regulators and others) specializes in monitoring and advising about this approach, Mobile Money for the Unbanked (MMU) suggest that around 80 similar services are now in operation around the world.

In the case of Afghanistan when the Roshan system was launched it was initially used to pay policemen's salary, which was set to be competitive with what the Taliban were earning. Soon after the product was launched, the Afghan National Police found that under the previous cash model, 10% of their workforce were ghost police officers who did not exist; their salaries had been pocketed by others. When corrected in the new system, many police officers believed that they had received a raise or that there had been a mistake, as their salaries rose significantly. The National Police discovered that there was so much corruption when payments had been made using the previous model that the policemen didn't know their true salary. The service has been so successful that it has been expanded to include limited merchant payments, peer4to4peer transfers, loan disbursements and payments.

Mobile money of this kind has also been used with increasing effect by aid agencies looking for an alternative to food distribution in humanitarian crisis situations. By setting up a mobile phone network running M-PESA it becomes possible to distribute and control flows of cash such that affected people can make purchases themselves rather than depending on aid convoys.[1]

Origins

[1] See the video interview with Suzana Moreira in chapter 10 which explores her social enterprise which uses the M-PESA model for remitting payments from migrant miners in South Africa to their families back in Mozambique).

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The original concept behind M-PESA was a project in neighbouring Mozambique via the operator M4Cel. Researchers funded by the UK Department of International Aid and Development (DFID) had noted that people in countries like Uganda, Botswana and Ghana were spontaneously using mobile phone airtime credits as a way of transferring money to relatives. (This idea emerged in several other locations as a bottom up approach – the first recorded was in the Philippines where the widespread availability of mobile phones and coverage and the huge geographical dispersal across hundreds of islands created the conditions for such emergence). Their research in 2002 led to the first credit4transfer scheme offered by M4Cel in 2004. Gamos (the research consultants) then proposed using a similar scheme to help repayment of microfinance loans in Kenya and with DFID support began working with Vodafone in 2005. The software supporting M-PESA began as a student development project and was then taken up by the technology consultants Sagentia; this underpinned the launch of M-PESA in 2007.

Success factors

Several aspects of the M-PESA case are worth drawing out as a study of innovation. First is that it offers a good demonstration of the social aspects of diffusion of innovation. Kenya, like many African societies, is heavily dependent on personal relationships and word4of4 mouth represents a key way for ideas to spread. In the case of M-PESA this helped build up the network effect; essentially without a critical mass of people connected to the system it doesn't offer much advantage. But the more connections there are the more attractive the system becomes. In the case of M-PESA this 'tipping point' was reached quite early and the widespread connectivity then enabled other services to be added which reinforced the value and drew more subscribers into the network. This network effect extended beyond the phone use itself to the network of retail stores able to offer the service so that people could deposit and receive money.

A Finaccess survey in 2006 revealed that 27 per cent of the population derived their main source of income from transfers from other people but at that time most of the senders (75%) were using informal means such as the bus and friends and family. By 2009 M-PESA had replaced informal transfer mechanisms and was used by 40 per cent of sender whilst the number of people involved in receiving transfers had increased to nearly half of the population.

Related to this is the precondition that many Kenyans had both a mobile phone and access to a well4developed mobile infrastructure. Like many emerging markets, Kenya benefits from not having had a highly developed fixed4line infrastructure; in 2008 the country had 17m mobile phone subscriptions but only 250K fixed line connections. Mobile phone penetration is running at around 83% of the population aged 15 or over and 42% of the total population.

An important issue is the regulatory environment which could have been a limiting factor in the introduction of such a radical innovation. It appears that the relevant authority in this case played a supportive ad active role to help shape the service and build the trust needed for people to use it. The Central Bank of Kenya (CBK) adopted a

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bold 'experiment first, then regulate' stance and was involved since the earliest M-PESA pilot stages in 2004. For example, the CBK insisted that all customer funds be deposited in a regulated financial institution, and reviewed the security features of the technology platform. Importantly interest earned on deposited balances must go to a not4for4profit trust and cannot be appropriated by Safaricom or passed on to customers. There are also limits on transaction sizes to address money4laundering concerns. Although this involved Safaricom in key commitments it meant that they were allowed to operate M4 PESA as a payments system outside the existing provisions of the banking law.

Beyond these system infrastructure elements there were other key factors affecting diffusion. In particular people had to be able to trust the system in terms of reliability and usability; Safaricom spent a significant amount of time and resource to build the brand around M-PESA and the story behind it. (See the advertisement as a typical example of the brand message)

It supported the fast development of the network effect with low pricing and with incentives for retail stores to get involved.

Another important feature was visibility; the M-PESA logo is bright and clear and is seen on all sorts of store buildings which now number over 20,000. The customer experience is also an important aspect which has been developed; Safaricom recruit store clerks with good language skills and operate an extensive staff training programme.

But it depended critically on word4of4mouth recommendations of the service.[2]

Innovation strategy

The diffusion of an innovation like M-PESA is difficult to manage because it represents a radical innovation – people have never seen anything like this before. It is a new product launched into a new market of people who had very little experience of formal financial services. In this it can be seen as a disruptive innovation, opening up a new market and in many ways the development and introduction followed that pattern of learning and growing the new market outside of the mainstream financial or communications services market.

Although Safaricom targeted an eventual network size of 1 million users (representing close to 20% of its total market of 6 million subscribers in 2007) it began with small pilots involving fewer than 500 people to learn quickly about the technological and user issues involved in the innovation. The lessons learned helped them set up a launch infrastructure which had 750 stores widely distributed and covering all the 69 administrative regions in Kenya. The early launch was not without difficulties including lengthy delays in reaching customer hotlines and many errors in transactions being processed.

[2] For a detailed discussion of the entry strategy and brand building, see Ignacio Mas and Amolo Ng'weno, 2010, Three keys to M-PESA's success: Branding, channel management and pricing, *Journal of Payments Strategy & Systems*, Volume 4 Number 4

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Additional resources

A key resource describing M-PESA and many related developments is the GSMA website: www.gsma.com

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Developing an organizational culture that facilitates radical innovation in a mature small to medium sized company: Emergent findings (Working paper series) February 2004

Abstract

Existing theories in the broad field of innovation management suggest that organizational culture affects the propensity of firms to be innovative, in their new product development offerings. A major thrust of inquiry implies that mature firms often lose their propensity to be innovative, as some aspects of organisational culture that were previously associated with successful incremental change, become the current cultural inhibitors of radical innovation. Whilst a large proportion of the existing empirical research has concentrated on incremental innovation or innovation management in general, there is little known about the specific aspects of organisational culture that facilitate radical innovation. Furthermore, the literature tends to focus on 'innovation stories' in larger firms which often simply assume that smaller firms are more agile and therefore more innovative in their approach to value creation. This paper reports the results of an exploratory case study into specific aspects of an organisational culture within a R&D setting that enable radical product innovation, in a small to medium sized UK based company in the tobacco industry. A grounded research methodology and an action research approach utilised an "issue" focus to surface the presence and intensity of cultural attributes that enable and inhibit radical product innovation. This investigation identified nine emerging themes and key constructs of a "local" innovation culture that were found to influence radicalness in new product development ventures. The interrelationships between the themes are mapped and discussed in the context of current theoretical perspectives in the field of innovation management. Finally a conceptual framework incorporating two archetypal forms of innovation culture is outlined to articulate and scope the transition between these two "ideal" states.

The Need for Radical Innovation

Innovation can be considered to exist along a continuum, from incremental innovation, in which effort is focused on trying to "do better, yet more of the same" to radical innovation in which ideas that are new to the company or new to the industry are actively being considered. Essentially this is a degree of resonance with McFadzean's (2000) notions of paradigm preserving to paradigm breaking activities happing in this context. For incremental innovation much is known about the management of the process, the innovation process is routine and systematic and can be modelled relatively simply. For radical innovation less is known about its management, the process is ill-defined and modelling it is more complex. See Diagram 1.

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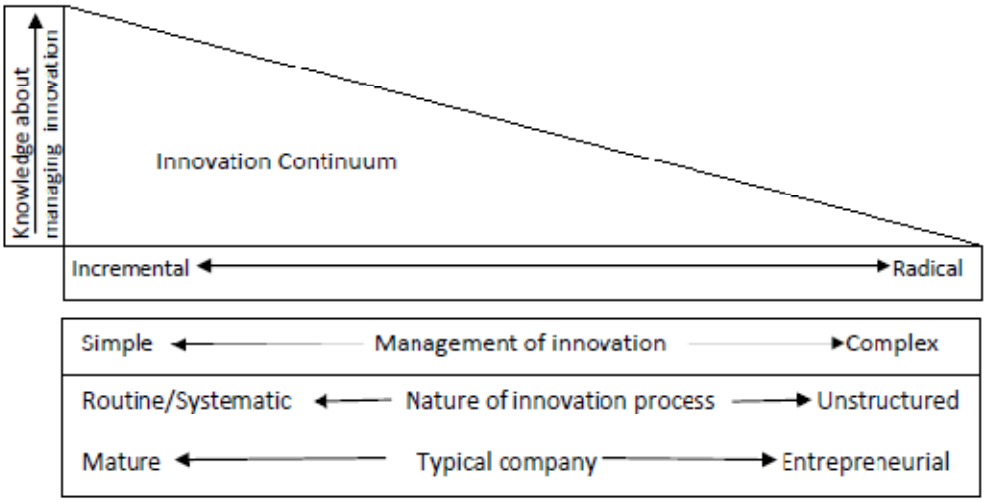


Diagram 1. The Innovation Continuum

Clearly innovation matters and it is important for success in design and manufacturing firms (DTI, 2003). Utterback (1994) states that innovation is a central determinant of longer-run success and failure for manufacturing firms. Successful companies are generally effective at responding to evolutionary changes in their markets. Where they run into trouble is in handling or initiating revolutionary changes in their markets or in dealing with disruptive technologies (Christensen and Overdorf, 2000). If a company is looking for growth levels that are significantly larger than the growth of the industry then it must take discontinuous or radical innovation seriously (Bessant, Birkinshaw and Delbridge, 2004). This perspective is supported by McDermott and Handfield (2000) who argue that in order to achieve long term growth firms need either novel replacements, new to the market products, or breakthrough products. Firms that focus only on incremental innovation are avoiding risk, but at the same time are missing opportunities. Utterback (1994) and Christensen (1997) noted how firms that dominate one generation of technology often fail to maintain leadership in the next. Radical innovation has one main benefit over incremental innovation which is that it creates products that do not replace or supplant other products, but adds something new; -'it takes you out of the "zero-sum" game that characterises many industry battlegrounds' (Bessant, Birkinshaw et al, 2004: 29).

Radical innovation is associated with breakthrough ideas (Gundling, 2000; O'Connor and Rice, 2001) and with the development of new business or product lines based on new ideas or technologies or substantial cost reductions that transform the economics of a business (Leifer, McDermott, O'Connor, Peters, Rice, and Veyzer, 2000). Hill and Rothaermel (2003: 258) differentiate between the two types of innovation in that an *incremental* technological innovation builds squarely upon the established knowledge base used by incumbent firms, and it steadily improves the methods or materials used to achieve the firm's objective of profitably satisfying customer needs. In contrast, a *radical* technological innovation involves methods and materials that are novel to the incumbents.

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Managing Radical Innovation

Whilst incremental innovations in new product introduction appear to be dependent on traditional management structures and processes (Ettlie, Bridges and O'Keefe, 1984), radical innovation can demand an organizational response that reaches beyond the "steady-state" approach to managing innovation (McDermott and O'Connor, 2002). Radical innovation is high-risk and high-return, and therefore does not respond well to the management practices applied to incremental innovation activities.

For radical product innovation the emphasis is on dramatic departures from existing products or their logical extensions (Veryzer, 1998). Increasingly radical innovations may utilise potentially disruptive technologies and so require a different set of rules to manage the innovation process. In such cases radical innovations involve the development of a new technological paradigm that create new knowledge and understanding, and potentially new industrial sectors. Uncertainty plagues radical innovation projects, whether this is technical, market, organizational or resource uncertainties. Consequently organisations are moving into unknown territory and experiment with new processes that largely elude systemization (O'Connor and McDermott, 2004). A radical innovation project is also marked by discontinuities, gaps, critical transitions and leverage points, often rendering traditional management modes of operation inappropriate (Leifer et al, 2000). This indicates why the business practices in some larger established firms mitigate against radical innovation, as the systems and processes that ensure continuity (the incremental improvements) become the inhibitors to innovation. (Tushman and Anderson, 1986; Ahuja and Lampert, 2001).

Context of the case study

A case study of a small to medium sized firm based in the UK was used as a basis for examining the innovation culture that facilitates radical innovation. A case study provides the opportunity to investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident (Yin, 2003). The firm in the case study is Cerulean, an international company that designs, manufactures, markets and supports a range of quality measurement equipment for the tobacco industry and specialized tube packing machines world-wide. Over the last ten years the company has grown to be a dominant player in its international market sectors but now finds itself unable to provide the "stream of innovative new products" that it believes is necessary to survive and grow. The company had a history of incremental innovation but had been unsuccessful in generating radical innovations from within. The perception from within the company was that the organizational culture – "the way we do things round here" was inhibiting radical innovation. Emphasis was placed on successful outcomes, risk was avoided and speculative or exploratory developments were avoided, in order to focus on product enhancements. Recent product introductions have been "me too" products that responded to a competitor offering or an evolution of an existing product. The last example of a product that included a radical innovation was conceived about five years ago. This radical innovation came from the use of an external consultancy to create the concept that was later developed and productionized within Cerulean. In order for the company to prosper, it was believed that it had to develop the capability to develop new lines of products as well as improving existing ones. Regaining the entrepreneurial spirit of the company from ten years previously was desired, but in a manner that could co-exist along with the existing business. Recent years had seen many improvements in using modern methods and

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procedures and these were also essential for efficient operation of the business.

Cerulean is an operating division of Molins plc. It has a head office in Milton Keynes in the UK. Design, development and manufacturing are all carried out exclusively at the Milton Keynes head office. This facility also contains the administration functions, Sales and Customer Service for the Europe, Middle East and Africa regions. There are service, or sales and service centres in the USA, Brazil, Venezuela, South Africa, Germany, India, Malaysia, and China. There are 105 people employed by the company with around 70 of these being based at the Milton Keynes head office. The Development team within Cerulean was the subject of the research. This is a team of around 15 development engineers with length of service ranging from less than one year to over thirty years. The team comprises skills in mechanical, electrical, electronic and software engineering.

Organizing for radical innovation: the role of culture

Although there are many dimensions that influence both incremental and radical innovation, for example, national systems, knowledge flows and labour markets, it is generally agreed that organizational culture is a significant influence on the propensity of an organization towards innovation (Tidd, Bessant, and Pavitt, 2001). Whilst there is disagreement about how to best organize for radical innovation, most managers agree that radical innovation is invariably a confused, uncertain process (Humble and Jones, 1989) when compared to incremental improvement- a continuing process with a more systematic approach to change. The original driving force for innovation is technological or the personal curiosity of individuals, rather than market led (Humble and Jones, 1989) and for most operating businesses, it is "an unnatural act" because the uncertainty is too high, the time horizon too long, and the investment too large, given the risks. Organizing for discontinuous innovation, especially in the highly uncertain "fuzzy front end" of the process, is often separated from ongoing business activities (Rice, O'Connor, Peters and Morone, 1998).

Different kinds of innovation require different kinds of organizational hardware- structures, systems and rewards and different kinds of software- human resources, networks and culture. During periods of incremental change organizations can rely on units with relatively formalized roles and responsibilities, centralized procedures, functional structures, efficiency-oriented cultures, strong manufacturing and sales capabilities and relatively homogeneous, older and experienced human resources. These units are characterized by a high degree of inertia, emphasizing efficiency, teamwork and continuous improvement. During periods of discontinuous innovation, organizations require entrepreneurial "skunkworks" type of units. These units are relatively small, have loose decentralized product structures, experimental cultures, strong entrepreneurial and technical competencies and relatively young and heterogeneous employees. They build new experience bases and knowledge systems (Tushman and O'Reilly III, 1999). Incremental innovation usually emphasizes cost or feature improvements in existing products or services largely depend on *exploitation* competencies. In contrast radical innovation concerns the development of new business or product lines, based on new ideas or technologies or substantial cost reductions that transform the economics of a business and require *exploration* competencies (Leifer et al, 2000). Diagram 2 summarizes the basic differences between incremental and radical innovation.

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Incremental		Radical
•Formalized •Centralized •Systematic	**Procedures**	•Contingent •Decentralized •Loosely structured
•Functional •Efficiency oriented	**Structure**	•Facilitating knowledge gathering •Supporting risk taking and experimentation
•Homogeneous •Older and Experienced	**People**	•Heterogeneous •Younger and Entrepreneurial •Technical •Questioning
•Mature •High Inertia •Focus on efficiency •Focus on team-working •Continuous Improvement	**Characteristics of the organization**	•Entrepreneurial •Focus on discovery •Individual co-operation •Frame-breaking improvement
•Cost reduction •Feature addition •Efficiency improvement	**Focus**	•New methods and technologies •Experimentation •New ideas •Creation
•Mostly existing	**Products / Technologies**	•Mostly new
•Exploitation	**Management**	•Exploration

Diagram 2. Characteristics of Innovation

It is suggested that some of the mechanisms that support incremental innovation can be counter-productive to radical innovation. 'What is sound management practice for incremental innovation- where speed, cycle time, and quick cash recovery are primary objectives- might actually hamper the radical innovation's progress' (Rice, O'Connor et al, 1998: 52). Von Stamm (2003: 260) argues that 'radical ideas tend to need room to grow and develop, they tend to change shape and scope' and therefore suggestion schemes, which are the foundation for incremental innovation, are not good for radical innovation. Organization cultures that facilitate radical innovation tend to be tolerant of risk taking and the uncertainty that facilitates this type of innovation (Claver, Llopis and Molina, 1998).

Veryzer (1998) refers to discontinuous or radical innovation as inherently messy, fraught with uncertainty and unfamiliarity. The process is non-linear, stochastic, highly explorative and experimental, involving probing and learning rather than targeting and developing (Rice, O'Connor et al, 1998). Management of radical innovation is suggested to be preaching and persuading rather than managing a defined process (Tushman and O'Reilly III, 1996). The organizational culture and adherence to process found in large firms tends to push efforts towards low risk incremental innovation (Dougherty and Heller, 1994). Less is known about effective management of the development process for radical innovation than for incremental. 'It is unclear what the landscape for radical NPD looks like' (McDermott, 1999: 632), and rather than being a predictable process 'developing radical innovations involves considerable risk and requires insight and foresight' (O'Connor and Veryzer, 2001: 231).

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Von Stamm (2003: 271) argues that 'incremental and radical innovation require very different business conditions, skills, structures and processes'. This is supported by McDermott and Handfield (1996: 371) who suggest that 'it is not unreasonable to expect that successful practices associated with new product development may be significantly different for discontinuous and incremental projects.' The organizational culture that supports incremental may not therefore act in the same way to facilitate radical innovation. In summary, the literature suggests that organizational culture enablers and inhibitors have an effect on the propensity of an organization to be innovative in new product development (Kanter, 1988; Ahmed, 1998; Martins and Terblanche, 2003). It indicates that mature firms often lose this propensity to be innovative, as the mechanisms that allow them to be successful become inhibitors to innovation (Leonard-Barton, 1992; Dougherty and Heller, 1994; Leifer et al, 2000; Leifer, O'Connor and Rice, 2001).

A conceptual framework to understand innovation culture

In order to develop a framework for understanding innovation culture, Schein's model of organizational culture is proposed (1984; 1991; 1992). Schein suggests that organizational culture is what a group learns over a period of time as the group solves its problems of survival. He argues that culture is a pattern of basic assumptions that have been evolved, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration. The model exists at three levels, artefacts, values and basic assumptions. This is shown in Diagram 3.
Artefacts are the visible organizational structures and processes. They include written and spoken language, the physical space and layout of the organization and the overt behaviour of the individuals. Schein divides these into three levels. The first is concerned with the physical artefacts like company logos. The second level is concerned with behaviour including organizational rituals. The third level is concerned with organizational anecdotes, stories and myths, and organizational heroes and villains. *Values* are the social principles, goals and standards held within the culture to have intrinsic worth. They define what the members of the organization care about. They are unwritten rules that allow members of a culture to know what is expected of them. The organizational culture reflects the values of its employees. By using these values the members are able to make decisions in order to tackle problems, issues and to develop solutions. *Underlying Assumptions* are at the most invisible level of the model. These assumptions are taken for granted beliefs and habits of perception, thought and feeling. They are rarely made explicit. When a solution to a problem works repeatedly it becomes taken for granted. These assumptions become learned responses that guide behaviour and determine how members think, act and feel. Schein's model of culture is a dynamic one. It suggests that the three different levels are continuously interacting to provide an emergent perspective of organizational culture.

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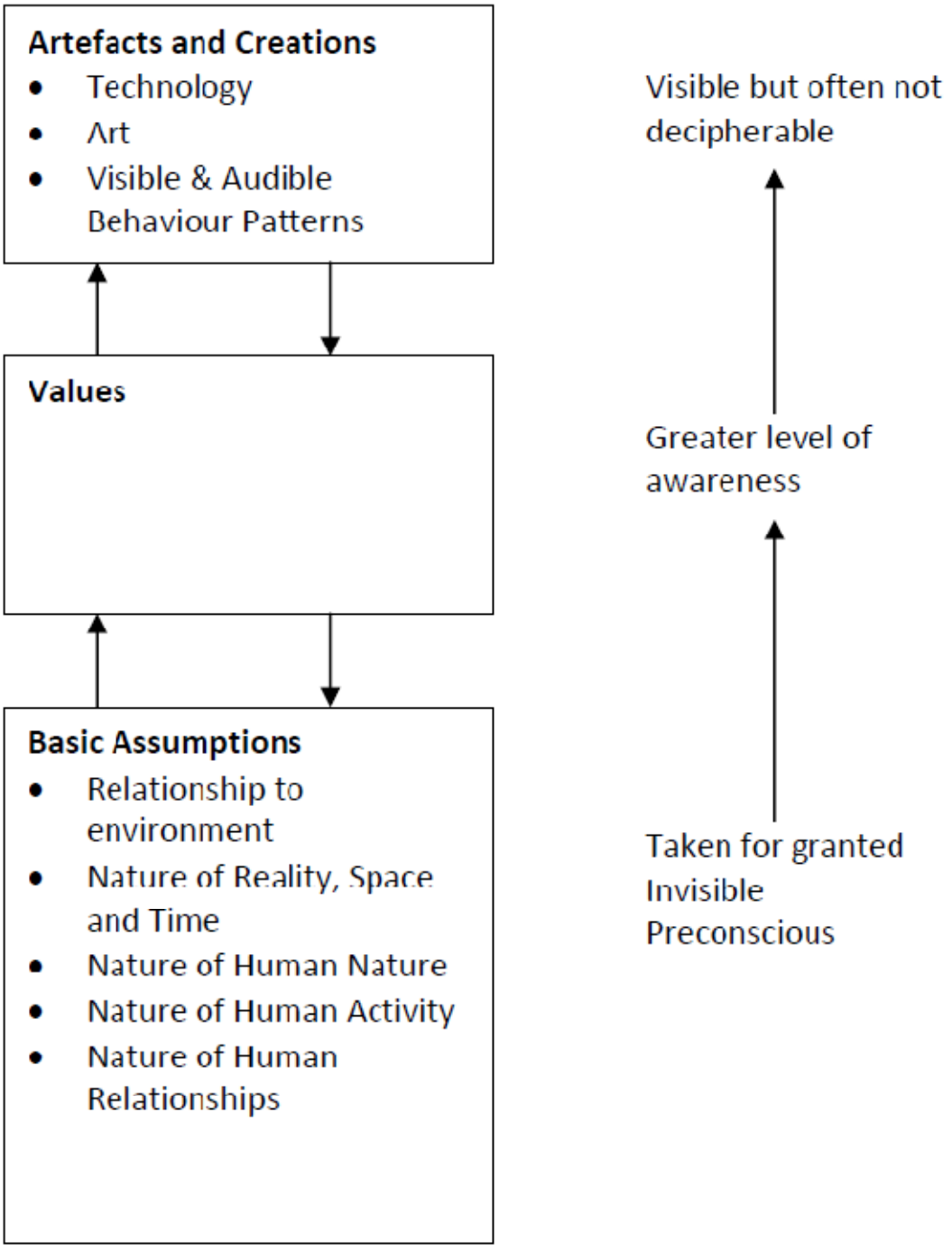


Diagram 3. Schein's model of Organizational culture

Schein's view focuses on what artefacts and values reveal about basic assumptions. The dynamic model asks, "how is culture constituted by assumptions, values, artefacts, symbols

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and the processes that link them?". All of the processes co-occur in a continuous production and reproduction of culture in both its stable and changing forms and conditions (Hatch, 1993). This dynamic model resonates with the perspective of innovation culture as a continuum from incremental (do better) to radical (do differently), and thus forms a basis for developing a framework to facilitate radical innovation.

The concept of archetypes (Greenwood and Hinings, 1993) is introduced to facilitate a descriptive representation of the characteristics of the two innovation "types"- radical and incremental. An archetype is defined in terms of two general statements. First, organizational structures and management systems are best understood by analysis of overall patterns rather than by analysis of narrowly drawn sets of organizational properties. This is the holistic perspective. Second, patterns are a function of the ideas, beliefs and values the components of an "interpretative scheme"- that underpin and are embodied in organizational structures and systems. An archetype is thus a set of structures and systems that reflects a single interpretative scheme. This way of defining an archetype is a departure from the more common treatment of structures and systems as disembodied attributes of organizations, which are linked in an adaptive way to context and performance. Greenwood and Hinings suggest that structures and systems are not neutral instruments but embody, wittingly or otherwise, intentions, aspirations and purposes.

Schein's dynamic perspective of organizational culture fits well with the dynamic view of organization design posited by Greenwood and Hinings and the researcher's critical realist (Bhaskar, 1978) perspective of organisational culture as emergent. Schein suggests that culture is what a group learns over a period of time as the group solves its problems of survival. He argues that culture is a pattern of basic assumptions that have been evolved, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration. The model posited by Schein suggests organizational culture exists at three levels, artefacts, values and basic assumptions. Greenwood and Hinings argue that archetypes reflect the holistic approach to the study of organizational arrangements and recognize interpretive schemes as providing the basis of pattern. Schein's holistic perspective of organizational culture resonates with this interpretative scheme.

Therefore the two archetypes proposed reflect the "ideal" positions for organization culture at either end of the innovation continuum. Type I is an incremental approach to innovation. A tendency to maintain or improve in small incremental steps – a "do better" attitude. This archetype is typical of a mature company. Type II is a radical approach to innovation. There is a desire to explore, to push the boundaries – a "do different" attitude. This archetype is typical of a entrepreneurial or "start-up" company.

Transition across archetypes

Greenwood and Hinings suggest that organizations tend to operate with structures and systems that approximate archetypes and that these organizations tend to move towards archetype coherence. Passage between archetypes (organizational change) is less common than archetype stability (organizational inertia). They also argue that 'archetypes are probably institutionally specific' (1993: 1057). This indicates that transition from Type I to Type II innovation culture is likely to facilitated by organization specific interventions, rather than a gradual diffusion. These interventions can be perceived as actions taken at the artefact and value level in Schein's model of culture. These two levels are inter-related and

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Schein argues that change in culture must be undertaken by attempting to change values and underlying assumptions. A value leads to a behaviour, and as that behaviour begins to solve the problem which prompted it, the value gradually is transformed into an underlying assumption about how things really are. As the assumption is increasingly taken for granted, it drops out of awareness, thus creating a shift in the organizational culture. Archetypes provide a holistic perspective of the innovation culture. Change therefore, from Type I to Type II should be conceived as a holistic process.

Research methodology

A grounded approach was adopted to surfacing the innovation culture characteristics that facilitate radical innovation. The research question was formulated as, "*What aspects of organizational culture facilitate radical product innovation?*" A grounded approach (Glaser and Strauss, 1967; Partington, 2002) to the research and participation by the Development team being studied allowed the data to be developed and refined. As the researcher is a manager in the company, this involved a participative approach (Reason and Bradbury, 2001; Coughlan and Coghlan, 2002). The plan for the research is shown in Diagram 4.

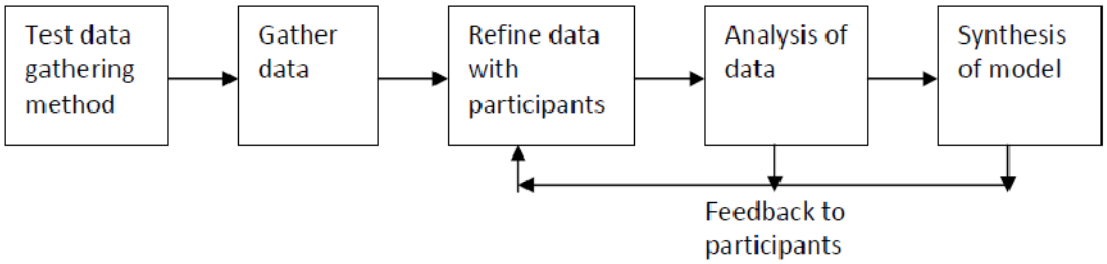


Diagram 4. Research plan

The method of identifying organizational culture characteristics was to use an "issue" to focus the members' attention on a specific action or event. The more visible manifestations of culture are artefacts. These may be easy to observe but difficult to decipher. Values and basic assumptions tend to remain hidden and may only reflect rationalizations or aspirations (Schein, 1992). An issue focus (Sackmann, 1991) enables the surfacing of the hidden components of culture. Given the ubiquitous nature of culture, organizational members cannot immediately reflect on their culture and describe it. A key concern in eliciting tacit aspects of culture is to provide a stimulus to respondents so that they are forced to make an interpretation that is based on their cultural framework rather than on the researcher. The stimulus should provide a specific context but leave enough latitude for interpretation. Faced with ambiguity people tend to draw on pre-existing categories already available to them for sense making. The tacit components of culture become apparent in the specific interpretations attributed by the respondents. In addition, an issue focus enables comparisons, because it introduces a specific context that forces respondents to draw on their existing knowledge. It channels the attention of the respondents to the same cultural aspects within a given organization and reveals the perceptual framework they are using to conceptualize the issue. To understand the Development team's culture it was necessary to identify shared values and basic assumptions as well as the artefacts. This was achieved by asking the team members to discuss the concrete examples of successful and less successful radical innovation.

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The issue used was an example of a good and a less successful radical innovation. The definition of "radical" was that the innovation involved application of a significant new technology to new market opportunities. The examples chosen by the participants were of a product launched in 1999 that was perceived as only moderately unsuccessful, and the use of a vision system that was perceived as being more successful. Both these innovations fitted the criteria to be considered "radical".

Two software packages were used to facilitate data gathering and analysis. *Decision Explorer* is a package that allows the drawing of cognitive maps. It was developed to help members of a team map their view of a problem and more effectively negotiate a consensus for action. It displays constructs and linkages between constructs that represent the meaning of the construct in terms of the explanations and consequences. These links are not taken to be causal in a precise way. The link is in the form of an arrow to show the nature of the linkage. An arrow out of a construct shows a consequence and an arrow into a construct an explanation. Each arrow gives explanatory meaning to one construct and consequential meaning to another (Eden, 1988). *NVivo* is a package that facilitates analysis of qualitative data. This software permits the coding and subsequent analysis of attributes within a series of documents.

Data gathering and analysis

The objective of the data gathering interviews was to take a good and a .
less successful example of radical innovation project experienced by the development team and allow the team members to talk about their experiences of radical innovation. These innovation projects contained features that could be considered as radical innovation (new to the company, new to the industry) (Hill and Rothaermel, 2003) and as a clear departure from what had gone before (Delbecq and Mills, 1985; Dewar and Dutton, 1986). The interviews were semi-structured and cognitive mapping (Eden, 1988; Jenkins, 2002) techniques were used to capture the views of each participant. Each interview was recorded and transcribed. Cognitive maps (Eden, 1988; Langfield-Smith, 1992; Swan, 1997) on the organizational culture aspects influencing the radical product innovation were drawn. These were later converted to Decision Explorer and refined during follow up interviews with each interviewee. Each follow up interview was also recorded and transcribed.

The individual cognitive maps were individually validated and conflated into a single map to represent the development team's collective cognition. The single map was further validated and refined. In a parallel process each of the transcripts was analysed using NVivo and codes were produced from transcript content analysis that represented the aspects of organizational culture that influenced radical product innovation. The analysis produced fifty-eight data categories that influenced radical product innovation. A collective decision was taken to further validate and refine the coding structure through a series of four workshops. This resulted in the clustering of codes into aggregate themes (higher level codes) that represented aspects of the innovation culture that were collectively considered to be positively associated with the facilitation of radical innovation. The themes and key constructs emerged through an inductive process in which the development team members continuously refined their meaning, and hence internal validity, in a collective manner (via workshops). The description and title for the themes is also an output from the workshop sessions.

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Findings: Emerging themes & key constructs

Nine themes and key constructs were identified and are briefly described below:
Company Infrastructure – Resources
This relates to the structure of the company around the development team, the resources made available to the team and the management style in which the team operate. It is termed "company" as the team members felt it related to the broader company that the team operates within. The theme is concerned with characteristics that are external to the team and which the team perceive as having no influence over.

External Confidence – Trust and self Belief
This relates to the team's perceptions about themselves by company members who are outside the development team, in particular the top management. These characteristics cross the team boundary, originating from outside the team and acting upon the team. The data categories are more intangible than those grouped in the Company Infrastructure – Resources theme.

Focus (Clarity) on Clear Objectives
This theme relates to the concept of having a clear and well defined objective for the development project and having an unmoving target during the time the development project is active. The team felt that the data categories in this theme were external in that the specification would be provided from outside the team, with most team members considering it top management's job to come up with the idea for a product and to provide a clear specification.

Team Constitution
This relates to the internal makeup of the team. It refers to the nature and composition of the team members and the data categories were seen as tangible and easily identified amongst the team members. They refer to the team as a whole and to the individual team members. The team characteristics related to this theme were considered to be internal to the team but the composition and manifest of team skills and experiences were perceived as being outside the control of the team, with top management the controller of these aspects.

External Perspectives, Inputs / Influences
This theme links data categories concerned with the team's interfacing with environments outside of the company. It relates to links to outside agencies and organizations that influence the radical innovation capability of the Development team. The data categories in this theme are perceived as being associated with external sources of information that are related to product needs or to available technologies.

Freedom / Latitude
This theme relates to the opportunity to take autonomous action. It groups together data categories associated with freedom to make decisions, to experiment, to define their own direction as opposed to having a pre-defined direction provided for them, and the opportunity to be self-managing and self-directing.

Attitude to Risk
This refers to the attitude within the team to taking risks. The data categories that relate to it include being adventurous, open to new and untried avenues and solutions to problems, and

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to being willing to make and learn from mistakes. It is influenced by the other themes but determines the behaviour of the team members when confronted with choices relating to unknown versus known and therefore safe options.

Internal Confidence, Trust – Self Belief
This theme groups together data categories associated with the team's belief in itself and confidence to resolve problems. It includes categories such as how the team members interact, how they support each other, how they perceive each other. It refers also to the confidence the team have in their own capability to produce solutions that are radical.

Department Growth and Development
This refers to the development team gaining knowledge and experience, and exploration of potential solutions. The theme groups the data categories that relate to the pushing of boundaries and desire to learn and explore. With this theme, there is an inherent requirement to cross the team boundary.

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The frequency of occurrence of each theme in the interviews is shown in Table I.

Table I. Frequency of occurrence of themes in interviews

Interview	Company Infrastructure - Resources	External Confidence	Focus ~clarity~ on clear objectives	Team constitution	External perspectives	Freedom ~ Latitude	Attitude to risk	Internal confidence	Growth and Development
1	■	■	■	■	■	■	■		■
2	■		■				■	■	■
3	■	■		■	■	■	■		■
4	■		■		■				■
5	■	■	■	■	■		■		■
6	■	■	■		■	■	■	■	■
7	■	■	■	■		■		■	■
8	■	■	■	■	■	■		■	■
9	■	■	■	■	■		■	■	■
10	■	■	■				■	■	
11	■	■	■	■	■	■	■	■	■
12	■	■	■	■	■	■	■	■	■
13	■		■	■				■	■
14	■	■	■	■					■
15	■		■		■		■	■	■
16	■	■	■			■	■		
17	■	■	■	■			■	■	■
18		■	■				■		■
19	■		■	■		■	■	■	■
20		■	■	■		■	■	■	■
21	■	■	■				■	■	■
22	■	■	■					■	■
23	■		■				■		
24	■	■					■		■
25	■		■					■	■
26	■	■	■		■	■	■		

Validity

Taking the requirements suggested by Coghlan and Brannick (2001), rigour during participative action research is established by:-

Use of action research learning cycles.
Repeated refining took place following data gathering and the involvement and participation

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of the Development team ensured that the findings in each of the group sessions have been developed and built upon at each subsequent session. Each stage of the research process was discussed with the Development team and their input sought. The results were fed back to them and their response solicited and used to develop the next stage of the process.

How multiple data sources were assessed to provide contradictory and confirming interpretations.
The data gathered during the interviews provided one source. Observations and reflections made in the researcher's journal provide a second perspective. Comments made by the acting Technical Director provide a third perspective. This individual was previously the Sales and Marketing Director and from mid February 2004 until November 2004 was responsible for the Development team. An interview with the acting Technical Director produced data that supported the findings from the pilot and main interviews and researcher observation.

Evidence of how the researcher challenged and tested assumptions and interpretations continuously throughout the project.
This has happened in two ways. The participation of the Development team to refine the gathered data provides one aspect of the testing process. Reflection and discussion with Cerulean employees outside the Development team provides an additional perspective. The results of the project have also been presented at various stages during the project to academic evaluation at a doctoral colloquium and at an Innovation Leadership Centre meeting.

How the interpretations and outcomes are challenged, supported or dis-confirmed by existing literature.
An evaluation of how the outcomes are compared and contrasted with the literature is presented as part of this paper.

Evaluating the findings in theory

The nine themes developed with the team represent the areas of innovation culture that were influencing radical innovation within Cerulean. These themes can be related to the literature on innovation culture, and relationships between the themes can be drawn based on this literature.

Freedom / Latitude
Risk is related to freedom to explore (Amabile, 1988b; Ekvall, 1991). Freedom to develop is widely recognized as a prerequisite for innovation (Rickards, 1985; Amabile, 1988b; Prather, 2000; Nijhof, Krabbendam and Looise, 2002). Freedom in this context refers to deciding what to do or how to do accomplish the task, a sense of control over one's own work and ideas. The most important type of freedom is operational autonomy- freedom in the day-today
conduct of one's work, freedom in deciding how to achieve the overall goal or mission. Organizational characteristics such as openness are supportive of innovation success (Huizenga, 2000). Prather (2000) also argues that trust and openness are important in shaping the climate for innovation. This is in resonance with Kaplan (1960) who suggests that freedom to chose problems and change direction (within restricted limits of programs and projects and goals of the organization) is one of the essential factors that positively

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influence creativity.

In an incremental environment the degree of freedom can be reduced and replaced with systems and procedures. These systems and procedures encourage careful improvement on that which already exists and are appropriate for successful operation of a business – the "do better" activities. The routines and systems that work well for normal business operation become inhibitors when applied to radical innovation development where experimentation and exploration are encouraged (Christensen, 1997; Sutton, 2001; Farson and Keyes, 2002). Abetti (2003) argues that over management can be as much an inhibitor to radical innovation as under management. Management of radical innovations requires balancing the natural desire of control with the realization of insufficient technical and market knowledge in order to guide and assist, rather than interfere with and control the innovators.

Attitude to Risk
'Attempts at radical innovation produce more failures than successes, and the magnitude and timing of results are highly unpredictable. Faced with these double-barrelled negatives, it is not surprising that executives feel more comfortable in other approaches to future growth; sticking to their knitting; gaining access to innovative technologies through acquisitions; or being a "fast follower" as new concepts enter the competitive arena' (Leifer et al, 2000: 4). Attitude to risk influences the way team members deal with uncertain situations (Schmitt, 2003). Groups that are risk averse will inhibit radical innovation (Ekvall, 1996; Harborne and Johne, 2003; Simon, McKeough, Ayers, Rinehart and Alexia, 2003). The predilection towards conforming acts and rewards for conforming- risk aversion- is suggested by Bouwen (1991) to inherently kill innovative ideas. 'Radical innovation will not happen without the right people. People with risk taking propensity, drive, and out-of-the-box thinking were involved in every project we followed' (Leifer, O'Connor et al, 2001: 110). An informal, open, and inquiring environment that values experimentation, with leaders promoting innovation by creating a shared belief that team members are safe to take interpersonal risks will facilitate radical innovation (Claver, Llopis et al, 1998; Andriopoulos and Gotsi, 2002; Gudmundson, Tower and Harman, 2003; Harborne and Johne, 2003).

Growth / Development
Marquis suggests that one of the lessons from companies that are successful innovators is that the main source of innovation is from people within the company. He states that 'training and experience of the people right in your own firm are the principal sources of information for successful innovations' (1988: 85). Learning from mistakes is a part of the growth of the group and development of both individual and group skills and experiences (Frohman, 1998; Andriopoulos and Gotsi, 2002; Chatman and Cha, 2003). Group members should be encouraged and stretched beyond their comfort zone. A managed learning process assigns challenging projects, and assists and monitors the individual participants (Andriopoulos and Gotsi, 2002). Engaging in shared learning and development across organizational boundaries, and increasingly across regional and national ones, facilitates the growth and development of the group and individuals and facilitates "do different" as well as "do better" innovation (Bessant, 2003). Development can take the form of a knowledge brokering cycle, where the best innovators systematically use old ideas as the raw materials for one new idea after another (Hargadon and Sutton, 2000).

External confidence
Senior management must be passionate about supporting radical innovation. The support,

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involvement, commitment and the championing of the CEO and senior management is a critical success factor. The role of radical innovation in accomplishing the company's longterm
strategies and objectives must be clearly stated and reinforced at all levels (Simon, McKeough et al, 2003). However although top management's support is strongly related to technical performance there is no indication that this becomes more important when the innovation is radical (Lee and Na, 1994). Pride in the team, in the company, coupled with knowing that innovation is mainstream rather than counter-cultural helps to stimulate innovation. Organizations with "cultures of pride" in the company's achievements and in the achievements and abilities of individuals will find themselves more innovative (Kanter, 1988). Belief in the team can be a major enabler for radical innovation. An example is the development of the Polaroid Land camera. With weeks to go before the deadline, it was Dr Land's unwavering support that drove his team beyond their limits to achieve a breakthrough innovation (Mascitelli, 2000).

Internal confidence
Creative thinking depends to some extent on the personality characteristics related to independence, self-discipline, tolerance for ambiguity, perseverance in the face of frustration, and a relative lack of concern for social approval. It is the "something extra" of creative performance (Amabile, 1997). This is supported by Hauser who argues that a culture that enables conflicts concerning discussion and prevents emotional conflicts will facilitate the early stages of innovation (1998). Employees who acknowledge and support each others' work and do not waste time protecting their own ideas or feeling threatened by others will facilitate this type of environment (Heilmeir, 2000; Andriopoulos and Gotsi, 2002). Nemeth (1997: 72) argues that 'dissent is a very economical mechanism for producing innovation.' In this environment people trust that others will listen to, learn from and inform them in order to facilitate innovation (Frohman, 1998). For radical innovation, breakthroughs occur when thinking outside the box - making strategic trade-offs between conflicting priorities, attempting to reconcile the seemingly irreconcilable (Syrett and Lammiman, 2002). Having a team who are confident in themselves will facilitate taking such a perspective as there will be no tendency to adopt a "not invented here" approach (Roberts, 1988; Schroeder, Scudder and Elm, 1989).

External perspective
'The need for external perspectives seems almost self evident' (Wolpert, 2002: 78). Successful innovation requires the ability to harvest ideas and competencies from a wide array of sources. If a company stays locked within its own four walls it will be unable to uncover and exploit opportunities outside its existing businesses or beyond its current technical or operational capabilities. This insularity may satisfy incremental innovation but is unlikely to be of benefit for radical innovation (Wolpert, 2002). The exposure to experience and technology outside the team or the company is a necessary component for innovation (Sutton and Kelley, 1997). Huizenga (2000) found that external sources are used more than internal sources to create knowledge and that co-operation with universities is positively correlated with innovation success. Cooper and Kleinschmidt (1990) found that in a study into new product innovation in 100 companies, one of the major factors that separated winners from losers was the effective use of outside technology and external scientific communication. Willingness to communicate with external stakeholders (Hauser, 1998) and linkages with external sources (Rothwell and Dodgson, 1991; Rothwell, 1992) will facilitate innovation. Discontinuous innovations tend to originate in the environment and are initiated by individuals operating as boundary spanners and gate-keepers for the firm. It

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is this process of identifying, understanding and acting on external emerging patterns in the environment that is the essence of radical innovation (Reid and de Bretani, 2004). Developing radical or disruptive innovations requires the meshing of sophisticated technological and market knowledge with visions about the future (von Wartburg, Teichert and Rost, 2003).

Clear objectives
Radical innovation is invariably a confused, uncertain process (Humble and Jones, 1989). Too specific a requirement will constrain the development to "do better" innovations. A lack of clarity in the project specification is likely to facilitate radical innovation, in that it permits latitude about how to solve the problem. The team members are not constrained to clearly defined and known methods. For radical innovation, "order and clarity" (generally accepted to support incremental innovation) may be detrimental. 'It is a well-known phenomenon that ambiguity is not threatening to highly creative people. On the contrary they become stimulated by it, they see the possibilities in an unclear situation. The effect of clear objectives on radical innovation ability is considered to be different from incremental innovation ability. General direction and strategic clarity are required for both types of innovation. Having clear objectives at tactical level is considered to be an enabler for incremental innovation only (Reid and de Bretani, 2004). Idea generation is the starting point for both radical and incremental innovation. Incremental ideas generally come from ongoing interaction between a company and its customer. For radical innovation ideas are much more likely to result from the synthesis of new and non-obvious insights from a disparate repertoire of technical information-the "fuzzy front end" (Leifer et al, 2000).

Team Constitution
Composition of an effective radical innovation team is suggested as comprising people with superior technical capability who are inquisitive, passionate, not afraid to be different, broadly educated, extremely bright, integrative, aggressive, flexible, able to take risks, goalorientated,
entrepreneurial and eager to learn the business. (Leifer et al, 2000). Innovators tend to be non-conformers and will disregard or violate existing organizational rules and norms as the need arises (Glynn, 1996). Selection of appropriate people, committed to the long term will facilitate breakthrough innovations (Wolff, 1988).

People appropriate for radical innovation are curious entrepreneurial people, solution finders not problem solvers (Leifer, O'Connor et al, 2001; Simon, McKeough et al, 2003). Team composition should be characterized by breadth of experience in addition to depth, a combination of product development skills and functional sophistication (Heine, 2001; McDermott and O'Connor, 2002). Non-conforming individuals and lateral thinkers add the ability to think of "do different" solutions to problems. Sternberg, O'Hara and Lubard (1997) argue that the type of personality required is one of determination and persistence in overcoming obstacles. They argue that creativity requires a risk-taking personality, someone who can take a stand and be a contrarian.

Team composition should be characterized by breadth of experience in addition to depth. A combination of product development skills and functional sophistication along with the lateral thinkers will facilitate radical innovation (McDermott and O'Connor, 2002). Group diversity is a major influence upon technical performance. A group that stabilizes its membership for too long not only decreases its productivity but tends to become insular (Roberts, 1988). In a similar manner, Tushman and O'Reilly III argue that team

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heterogeneity facilitates discontinuous innovation (1999).

Company infrastructure
Centralization and formalization should be reduced in order to facilitate radical innovation (Ekvall, 1996). The concept of an organic organization that can react to change as opposed to a mechanistic one that is bureaucratic and fixed has a long been established (Burns and Stalker, 1966; Gresov, 1984). Organizations that are structurally complex, formal and decentralized are likely to introduce new products and adopt only incremental departures from process technology when they are innovative. Incremental innovation processes that lead to new product introduction appear to be dependent on more traditional structural arrangements and market oriented strategies. An aggressive technology policy and unique structural arrangements appear to be necessary precursors to pre-innovation conditions that support radical innovation (Ettlie, Bridges et al, 1984). High innovation companies in USA, Europe and Japan have flatter organization structures, smaller operating divisions and smaller project teams (Kanter, 1988).

Resources can act as both enabler and inhibitor. The provision of too many or too few resources will inhibit radical innovation. This perspective of "not too much" and "not too little" applies to several resources required for innovation (Hohria and Gulati, 1996). Gundling (2000) refers to this middle ground of resource provision as a "Goldilocks" principle. In managing the people side of radical innovation, one of the leadership roles that facilitates innovation is that of a sponsor (Roberts, 1988; Dougherty and Heller, 1994; McDermott and O'Connor, 2002). Management of a team tasked with developing radical innovation is participative (Wolff, 1988), proactive (Acar, Melcher and Aupperle, 1989), and encourages risk taking, conflict and questioning. These activities are perceived as unstructured and counter productive to management of routine business activities (Rice, O'Connor et al, 1998). Loosening control is necessary for radical innovation (Ekvall, 1996; Tushman and O'Reilly III, 1996). Kelly Johnson from the Lockheed Skunk Works suggested to Ben Rich that 'Control is the name of the game and if a Skunk Works really operates right, control is exactly what they don't get.' (Rich and Janos, 1994: 288).

Exploring the interrelationships between emerging themes and key constructs

The themes and links between the themes were mapped using Decision Explorer. The links are based on the literature discussed above. The links are not intended to indicate precise causality. The arrow shows the nature of the linkage. Each arrow indicates that the theme at the tail has some influence on the theme at the head. The links are based on connections suggested in the literature. The nine themes are categorized as artefacts or values based on Schein's model for this exercise. The result is shown in Diagram 5.

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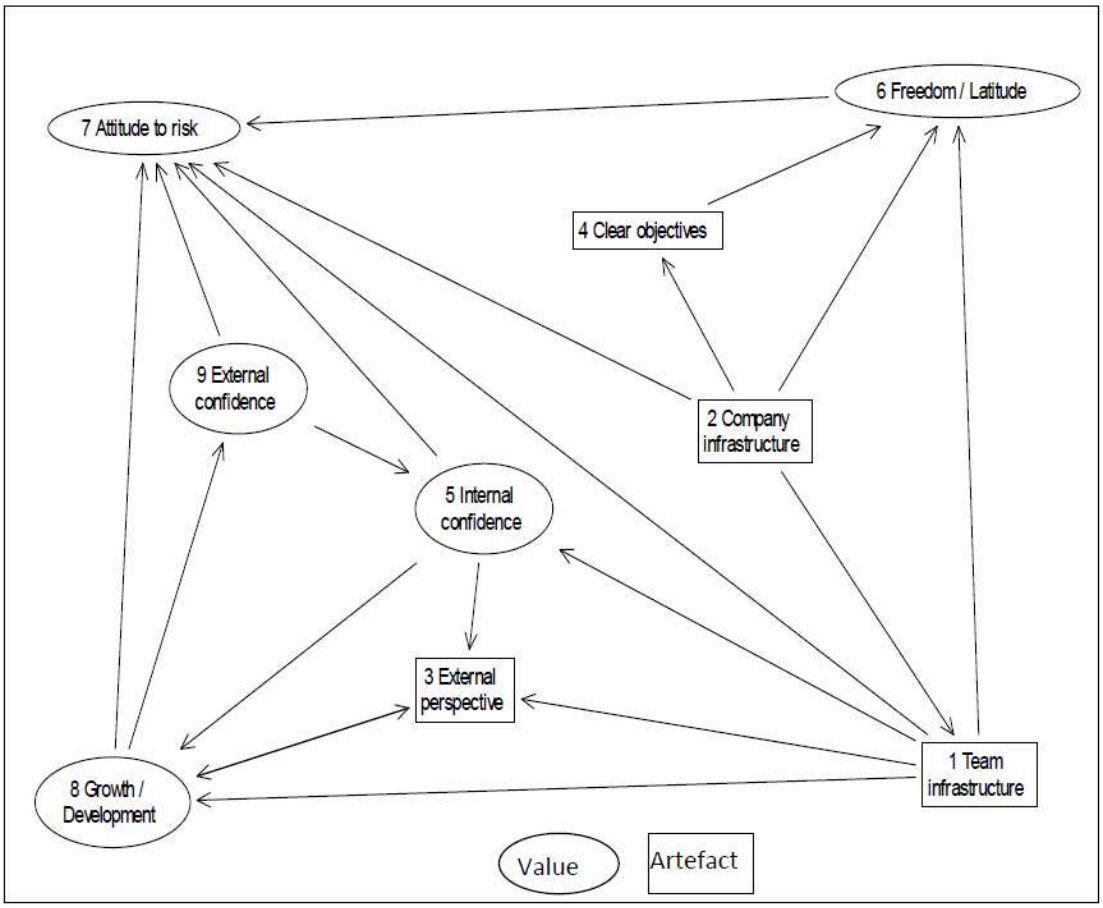


Diagram 5. Map of links between the Themes based on Schein's model

This map indicates that Attitude to Risk is at the head with inputs from other themes. Company infrastructure is the tail with links into four themes. The map shows each theme as an artefact (the visible manifestations of the culture) or as a value (that which people say is the reason for their behaviour or what they ideally would like those reasons to be). A summary of the heads and tails derived from the key literature is shown in Table II.

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Table II. Links between the themes

Theme	Heads	Key literature	Tails	Key literature
Team constitution	External perspective Internal confidence Freedom / Latitude Attitude to Risk Growth / Development	(Reid and de Bretani, 2004) (Leifer et al, 2000) (Gryskiewicz, 1999) (Leifer et al, 2000) (Glynn, 1996)	Company infrastructure	(Humble and Jones, 1989)
Company infrastructure	Team constitution Clear objectives Freedom / Latitude Attitude to Risk	(Kanter, 1988) (Amabile, 1988b) (Harborne and Johne, 2003) (McDermott and Handfield Robert, 2000)		
External perspective	Growth / Development	(Terziovski, Sohal and Howell, 2002)	Team constitution Internal confidence Growth / Development	(Reid and de Bretani, 2004) (Glynn, 1996) (von Wartburg, Teichert et al, 2003)
Clear objectives	Freedom / Latitude	(von Stamm, 2003)	Company infrastructure	(Simon, McKeough et al, 2003)
Internal confidence	External perspective Attitude to Risk Growth / Development	(Syrett and Lammiman, 2002) (Syrett and Lammiman, 2002) (Sutton, 2001)	Team constitution External confidence	(Leifer et al, 2000) (Amabile, 1988b)
Freedom / Latitude	Team constitution Company infrastructure Clear objectives	(Gryskiewicz, 1999) (Harborne and Johne, 2003) (Amabile, Conti, Coon, Lazenby and Herron, 1996)	Attitude to Risk	(Amabile, 1988b; Ekvall, 1991)

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Attitude to risk			Team Constitution Company infrastructure Internal confidence Freedom / Latitude Growth / Development External confidence	(Leifer, O'Connor et al, 2001) (Schmitt, 2003) (Claver, Llopis et al, 1998) (Amabile, 1988b; Ekvall, 1991) (Chatman and Cha, 2003; Frohman, 1998) (Kanter, 1988)
Growth / Development	External perspective Attitude to Risk External confidence	(Roberts, 1988) (Chatman and Cha, 2003) (Sutton, 2001)	Team constitution External perspective Internal confidence	(Glynn, 1996) (Bessant, 2003) (Sutton, 2001)
External confidence	Growth / Development	(Terziovski, Sohal et al, 2002)	Internal confidence Attitude to Risk	(Kanter, 1988) (Mascitelli, 2000)

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Table III. Archetypes of radical and incremental innovation

	ARCHETYPE	
	Type I	Type II
Theme	Incremental "Do better" Maintain	Radical "Do different" Explore
Freedom / Latitude	Unnecessary, as systems and procedures can be used to control continuous improvement. A process driven environment where incremental improvement is encouraged and rewarded.	Necessary to allow the thinking to go beyond what currently exists. Exploration and discovery are part of the way things are done.
Attitude to Risk	Risk is minimized or avoided. Following processes and procedures ensures that there is minimal exposure to uncertainty.	Taking risks is encouraged. Uncertainty is a part of the environment and discovery is accepted as being linked to taking risk.
Growth / Development	Unnecessary for the pursuit of incremental improvement activities. May hinder the procedures being followed .	A desire to grow and develop the ability and knowledge of the group. A hunger to know more and know why.
External confidence	Unnecessary for the pursuit of incremental improvement activities. The incremental improvements are generated and controlled from within the group and are unaffected by external perception of the team.	Having confidence and believing in the team supports the team's ability to "do differently" in pursuit of radical solutions.
Internal confidence	Confidence is based in belief that following the system or working to a defined specification will lead to incremental improvements. Peer support and respect, whilst beneficial, is not essential. Following the system is more important. The team members are components of the system.	Confidence among the team members that they can find a radical solution. Working with and respecting the individual talents of each team member. Questioning, challenging but also supporting and nurturing the other team members. Team members are an autonomous unit that believes it can "do differently" to provide the radical solutions.
External perspective	Some relevance from the point of benchmarking, however this tends to provide a target for the team to match. It	Essential to provide alternative perspectives and awareness of new technologies. These may not solve the problem but

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	reinforces the "do better" mentality of the team.	may trigger a "do different" solution that leads to radical innovation.
Clear objectives	Necessary for providing a target to work towards and guidelines to operate within.	Too specific objectives may inhibit the discovery of alternatives. Objectives that are not specific and clearly defined will encourage questioning and permit knowledge advancement.
Team Constitution	Partly necessary for this group as individuals who can and are willing to follow the processes are required. Experience of technology is only necessary for application of known tools and methods. Preferable if the team members are like-minded individuals who will work well together.	The team must have a mix of creative individuals who have sufficient experience inside or outside the subject area such that they can apply lateral thinking to provide a radical solution. The team should comprise different minded individuals who can work with some degree of uncertainty and conflict as part of the day-to-day activities.
Company infrastructure	Requires a management style that encourages conformance to rules and procedures. Resources and time are necessary to complete the improvement tasks. An environment that is supportive of a "do better" or "continuous improvement" approach is beneficial.	Requires a management style that encourages risk taking. Bureaucracy or autocracy are likely to inhibit this group. Some restriction in resources is necessary for creativity – Goldilocks principle –not too little and not too much. Having a Champion to provide support at a high level is beneficial.

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Archetypes of incremental and radical innovation culture

Based on the themes derived from the research, the literature discussed above and the Greenwood and Hinings concept of archetypes, a model of Type I and Type II archetypes is proposed. This describes an ideal position of the two organizational archetypes in the form of the nine emergent themes. The model is shown in Table III.

Discussion

Comfort, caution, desire for safe solution and an aversion to doing differently appear in the analysis of the data. The Cerulean Development team exhibit strong tendencies towards an incremental "do better" pattern of product development. The attitude of the Development team has been described by the acting Technical Director as the opposite of a "can do" approach. This may be a result of the risk-averse attitude within the team manifesting itself as justification for not taking action. Radical innovation is rooted in risk and a firm that embraces radical innovation must also be prepared to embrace risk. The Development team's perspective that new product ideas should come from outside the team, in the view of the majority from the top management, indicates a perspective that encourages instruction following rather than taking a pro-active approach.

The nine themes evolved during this stage of the project can be represented as either internal or external to the group and either visible (artefacts) or as perceived (values). The group that falls into internal and perceived represent the domain of values within the group. Although it could be suggested that some of the themes outside this area are not "organizational culture", by adopting Schein's model as a method of visualizing the culture of the group, it is argued that the other themes represent the visible manifestations of the group culture that relates to radical innovation. The themes that have emerged from this stage of the research refer to the organizational culture that relates to radical innovation. They do not and are not intended to represent a complete picture of the organizational culture of the group. The themes are also inter-linked. The source of the links is the company infrastructure. This is the environment in which the team operates and this theme acts to influence many of the other themes but is not influenced itself by any other theme. Attitude to Risk is at the head of several other themes. This tends to indicate that the Development team's perspective of taking risk is influenced by several other constructs, and as such is capable of being changed by addressing these other constructs. The links to the themes in the internal and perceived (values) area of the model reflect the influence that the artefacts have on values and values have on artefacts, both acting upon each other to allow the organizational culture to develop (Hatch, 1993).

The themes do not exist as stand alone entities. They co-exist as representations of the innovation enabling or inhibiting culture in the Cerulean Development team. The data gathered relates to radical innovation, rather than innovation in general. The results although applicable to the Cerulean team, do have some support in extant literature. Therefore there may be some degree of generalizability outside the area being studied.

Using archetypes as a basis for representing the innovation supporting culture allows the development of two ideal positions. Type I represents an incremental innovation supporting culture. Type II represents an innovation culture that supports radical innovation. The holistic approach that the use of archetypes facilitates allows the comparison and contrast of

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the two types. There is some commonality, but there are also clear differences in the culture

characteristics that operate to facilitate each type of innovation. These are ideal types and it is unlikely that any organization would exhibit the characteristics of one type exclusively. However the use of the ideal facilitates the "end point" towards which any change process or activities should be directed in order to enable the desired characteristics for radical (or incremental) innovation. Transition between archetypes is facilitated by using Schein's model. Change can be distinguished between incremental change, frame breaking change and quantum change. The dynamics of the process are different from incremental to large scale change, which involves movement from one archetype to another (Greenwood and Hinings, 1993). A series of interventions to facilitate change rather than a diffusion from one archetype to another is suggested as a method of moving towards a radical intervention culture. If these interventions are perceived as actions taken at the artefact and value level in Schein's model of culture, then transition between archetypes is possible by embedding new values and basic assumptions. As the value leads to a behaviour and as that behaviour begins to solve the problem which prompted it, the value gradually is transformed into an underlying assumption about how things really are. As the assumption is increasingly taken for granted, it drops out of awareness, thus creating a shift in the organizational culture. This shift facilitates the transition towards Type II radical innovation culture. The change necessary for the Cerulean Development team is to move the underlying beliefs and taken for granted assumptions about failure and risk taking to a position where these are believed to be opportunities for exploration and exploitation. Further study on examples of successful and less successful radical innovations in mature small to medium sized firms would provide support for the innovation culture model suggested in the paper. Such studies would also indicate appropriate interventions to transition between Type I and Type II innovation cultures.

Summary

Learned behaviour in any organisational grouping or community is an outcome of the values, ideas, techniques, habits, routines which are passed on by one generation to another – in a sense "a social heritage", which amounts to set of solutions to problems that others may have met and solved before. This learned behaviour, or social inheritance, of any community is called "culture" (Bilton, Bonnett, Jones, Sheard, Stanworth, and Webster, 1987).

The nine themes represent aspects/attributes of Cerulean's existing organisation culture that enable and inhibit the development (or institutionalization) of a radical innovation culture. Using Greenwood and Hinings (1993) archetypes as a basis for representing the innovation supporting culture allows the development of two archetypes. Type I represents an incremental innovation supporting culture. Type II represents an innovation culture that supports radical innovation. The holistic approach that the use of archetypes facilitates allows the comparison and contrast of the two types. Whilst there is some commonality, there are also clear differences in the culture characteristics that operate to facilitate each type of innovation. The archetypes are considered to be ideal types. It is unlikely that any organization would exhibit the characteristics on one type exclusively. However the use of the ideal facilitates the "end point" towards which any change process or activities should be directed in order to enable the desired characteristics for radical innovation. The change necessary for Cerulean is for the Development team to change their underlying beliefs about risk taking to a position where risky decisions are believed to be opportunities for

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exploration and exploitation. Schein's model acts as a guide for managing and monitoring the transition between archetypes at various levels of analysis. Any proposed interventions to change the innovation culture could be conceptualized as artefacts or values that lead to a change in the basic assumptions (Schein, 1992). By changing the basic assumptions and values, behaviour changes can be embedded in the organization as "the way we do things around here", thus leading to the desired radical innovation culture. In this way a social heritage for "radicalness" could be created.

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Lynne Maher

JB: Well, I'm very lucky today to have with me Dr Lynne Maher who spent most of her career working in clinical and operational roles at local and national level in the NHS and has now moved to New Zealand as the Director for Innovation at Ko Awatea in Auckland.

JB: Lynne, thanks very much for talking to me. I wonder if we could, perhaps start with you telling us a little bit about the similarities and differences between the two health systems, we've got this huge health service in the UK with lots of challenges, is this similar in New Zealand?

LM: Thank you John, yes, I have found that the New Zealand (NZ) health system is similar to the NHS although it's on a much smaller as there are only around 4.6 million people living here. Most services are free at the point of need and the levels of clinical care are of a similar high quality as in England. The main differences are that in NZ is that there is a payment to be made when you visit your GP, although there is support for those who are unable to pay, and there seems to be a higher proportion of people who have private health insurance, other than that NZ has very similar standards and challenges.

JB: How does Ko Awatea contribute?

LM: The name Ko Awatea was gifted to us by our local Maori Community. It means new beginnings and relates to the dawn or 'first light'. It is a department which sits within Middlemore Hospital and provides support for innovation, improvement and education both within the local Counties Manukau health system and more widely across NZ. Areas of focus include exploring ways to create equity for all to access health and care services, creating new models of care, reducing waste in the system for example the level of *Did not attend' s* for out patient appointments, testing the increased use of technology to streamline work and of course increasing safety. Health care workers are supported through coaching, guides and toolkits including virtual or 'e' learning, we have also developed capability building programmes in leading improvement which are not only available to our local staff but for others across NZ.

JB: So, it's very much a support for the practitioners across the health service, but it's providing them with tools and resources, but you're feeding that, also, with your own research so that you're generating new tools, new techniques, new approaches.

LM: Yes, we like to consider ourselves as 'thought leaders'. So, we are absolutely searching for new approaches and working with people to test these so we can be clear about the benefits they can bring to health services. We work with frontline practitioners, administrative staff, senior leaders, consumers and family members. We also contribute to activities such as the New Zealand Innovation Awards helping to seek out and nominate teams for the awards and assessing entries. This is an activity that I am personally involved in and am amazed at the increasing number and quality of entries and how these concepts can benefit health. For example, entries focussed on education, technology, design and engineering often have fantastic ideas that would benefit health.

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JB: So, very much the work is around how to manage innovation more effectively and how to engage all the players in the health system.
LM: Yes, and our focus is on how to help people to make a practical difference, being on site in the hospital and physically in the community really helps with that.

JB: Absolutely. Within that context, I know one of the things you've been working on is what you've called 'experience-based design'. I wonder if you could tell us a little bit about that and perhaps give us a couple of examples

LM: Yes, I started working with others to develop a way that we could specifically partner with patients and families and learn from their 'lived' experiences of receiving health care about 10 years ago while I was in the NHS. Working in this way was usual practice in other industries who provided some sort of service for example, hotels, airlines and theme parks. Mental health services were also pioneers but other areas of health and care services were not really use these approaches at that time.
We started to explore these concepts and came across some fantastic work being undertaken by design agencies. They have expertise in understanding customers experiences and then by working with those customers and using their insights about what works well and what doesn't, they are able to make improvements which lead to better experiences of those services. This includes the way we check in and out of hotels, our journey through airports, our experience in the retail sector and restaurants, how we interact with the internet and our mobile phone. Designers work very closely with the end customer to create services that provide the best experience possible, one of the reasons for this is that if the consumer has had a good experience, they will use the service or brand again, this customer loyalty is precious.
Now, even though that example is set in a commercial world, we realised that there was a great opportunity to use the methods within healthcare environments. We all really want patients to have high quality, effective and safe care and, we also want them to have a good or great experience. The concept is also just as relevant and important for health care staff, if we can learn from staff experiences, gather their ideas and work closely with them to make improvements, then their experience of delivering care can also be improved.

We regularly find that even if a process of care is seemingly very slick, very efficient, very safe, it could be that the patient's experience of that care was diabolical, in some respects. Alternatively, we have spoken to patients who had not had the best clinical care that we would wish, but, what they describe as respectful and honest communications and positive relationships with staff had influenced their overall experience, which they subsequently rated highly. We repeatedly find that patients really value being treated with respect, want to be able to ask questions and understand what is happening at every step of their journey, want to be involved in decisions about their care and want to know how they can best contribute. Actually, if we think about it, this is what any single one of us would want isn't it.
Being able to understand experiences of delivering and receiving care provides us with essential data which will inform any improvements or innovations. Many studies are finding a significant relationship between staff experience of delivering care and patient experiences of receiving that care, we need to focus on both.
Co-design is a way to understand health services from multiple perspectives this 'data' yields what I describe as 'golden nuggets', insights that we would not have had

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without working closely with staff, patients and families. For example, a better understanding of why patients don't come to specialist appointments, they 'do not attend (DNA) with reasons that range from; I did not understand what the purpose of the appointment was, to I simply cannot risk taking time off work, to I am just to scared in case I find out something bad. A common practice to improve these DNA rates is to send out text reminders, these reminders will be helpful for some but do not influence those who don't understand, cannot leave work or are fearful. This reminds me of a quote that is attributed to a few people including Henry Ford *"If you always do what you've always done, you always get what you've always gotten"*. By working closely with staff and patients we are much more likely to understand the root cause of healthcare challenges and better understand opportunities for improvement that can transform peoples' experiences and health services.

I have been privileged to be involved in co-design projects and programmes that have made tangible differences for example; the difficulty in finding your way within hospitals can be stressful at least but can also result in people being late for appointments or even missing them altogether. One project team who was working closely with patients discovered that appointment letters clearly stated that a test would take place in the x-ray department. However, there was no sign in the hospital that said 'x-ray', the sign for that department said Radiology. Many people had missed diagnostic appointments which was worrying for them and also caused additional work for staff who had a gap in their schedule and also needed to reorganise the appointment. This team had previously tried to improve the rate of patients turning up on time but the had not looked closely at the detail of their appointment letter, not one staff member had realised the mistake before they worked with patients but it was one that could quickly be changed and in turn saved the anxiety for the patients, reduced wasted time in the schedule and saved staff from needed to re book. An example with similar results happened when patients arrived for diagnostic tests but were not prepared as well as they needed to be which led to the cancellation and re arrangement of the tests. When working closely with patients we found that the instructions they had were actually incorrect and the phone number that was provided if patients wanted help had been mistyped and was actually disconnected. Once again staff had assumed that patients were just not paying enough attention to what they were being asked to do, but by working with them discovered the errors in the instructions given. In both of these examples staff had been working on improvements for a while but until they worked closely with patients they were not armed with the root cause of the problems; the 'golden nuggets'.

JB: This is fascinating stuff and, clearly, it has a link to some of the innovation theories around bringing users into the innovation process right at the front end. You've given some great examples. I guess the other question that begs is what are the difficulties in actually making this kind of thing happen? It seems to me almost a no brainer that we want to have a better quality experience all round. What are the difficulties in actually making that happen?

LM: I think some of challenges are around our mindset. Many organisations would say that they do engage patients and cite examples such as through their annual forums, satisfaction surveys and net promotor systems that ask patients to indicate "*How likely is it that you would recommend our service to a friend or colleague?*" These are all helpful and do provide an indication in broad terms of how patients

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would rate services. However, if satisfaction drops or people are increasingly saying that they would not recommend the service we often don't know the detail behind that which means we can't be sure what we need to do to improve it. By exploring experiences in more depth, actually talking to people, we can gather information which is more likely to provide the level of detail that we need in order to improve services.

There is often concern that if we ask patients about how we could improve, they will identify things that our health services just cannot afford. The opposite is true, patients identify points in the process that either don't make sense or don't add value or that can be achieved in a much more cost-effective way. Patients are aware of the fact that health services have finite resources and they want to play their part in helping us to provide the best we can within those resources.

We also find that for some staff the transition of relating to patients in a different way can be difficult. Their professional expertise is still highly valued but now the expertise that the patient brings including their lived experience of care and expertise from their industry, workplace or community becomes equal and that changes the conversation. However, I think it's a gift. Not only are we gaining more insights about peoples experiences of health but also their insights and ideas from their industry, workplace or community. This is often how innovation happens; taking ideas that might be commonplace in one industry but not in your industry but if adopted could lead to significant improvements. I have worked with women who are managing children, unwell parents and a community initiative; they are fantastic at project management! I have worked with people from manufacturing, the retail industry, lawyers, IT specialist, fisheries experts, film makers and so on, they all bring excellent new ideas from their industry to ours.

Like any project or initiative this work does need strong leadership support. The support for staff to have time to undertake the work, help with any challenges that happen and advice on how to create a compelling story of the benefits achieved. If you ask anyone who has worked on a project what has been their biggest challenge or what is the most precious commodity?' they will say it's time, 'we haven't got time.' We do need to find time for people to be involved in improvement and innovation, because if we can find time now, we can actually save time that is wasted for example by reducing rework as I mentioned earlier.

JB: One last question prompted by this discussion of the user's experience, the patient's experience: many of the examples you've given are around improving the quality of what's actually happening for everybody concerned and that's, as we know from so many sectors, hugely important. Are there examples where that process also generates a completely new way of thinking, perhaps opens up completely new innovations?

LM: Yes, now that the concept of understanding experiences and co-designing improvements is becoming more accepted we also have more examples of innovations internationally. In New Zealand the health system in Canterbury needed to completely redesign its health system and they set up a way of working where people in the community could; share their experiences, articulate what was important for them and discuss their ideas for improvement. This has already resulted in changes to the

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design of buildings and processes but also to the whole system of care which now has a much higher provision of services based in the community. An even more radical example is from Alaska which resulted in the local native community taking greater control over their health services. Their role changed from them being 'recipients of services' to 'owners' of their health system, which they not only helped to redesign but also now manage. The Kings Fund has written case studies about both of these examples and they are available to read if anyone would like to explore further.

Canturbury- https://www.kingsfund.org.uk/publications/quest-integrated-health-and-social-care

Alaska- https://www.kingsfund.org.uk/publications/population-health-systems/nuka-system-care-alaska

Another interesting change is the British Medical Journal who made a radical move to very meaningfully partner with patients. They now co-produce the content they publish with patients and ask others writing articles to do the same. They have patients on their editorial board and at major conferences that they are involved with. It's a major change in the industry and they are pioneers and role models in partnering with patients.

JB: That's absolutely fascinating. Thank you very much indeed, Lynne.

LM: Thank you.

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User led innovation – the Open Door project

Public services represent an important innovation challenge – that of dealing with multiple stakeholders and the 'contested' nature of innovation (Hartley 2005). Whilst it may appear that people have little choice in public services and thus the driver of competitiveness is lacking, the reality is that there is increasing pressure for change but coming from multiple and often conflicting directions. Demands for cost cutting on the funding side push providers towards more efficient solutions but at the same time advocates and lobby groups on behalf of users are driving towards non-price aspects such as service quality, flexibility and customization. The result is increasingly a search for complex solutions to complex problems – and suggests that some of the most radical innovation is actually taking place in and around the public sector (Albury 2004).

As a recent report put it, *'current approaches to public service reform are reaching their limits..... a wide range of prominent issues, including the environment, crime, and public health concerns such as smoking and obesity, cannot be adequately addressed by traditional services. Effective responses must encourage new norms of behaviour within society, developing approaches in which those who use services become involved in their design and delivery..... we need a radical transformation and a new approach: co-created services'.*

(Leadbeater)

Co-created services of this kind require mobilisation of knowledge and resources which are distributed across communities and an active engagement of members of those communities – rather than central and unilateral supply driven solutions. This raises again the issue of user-led innovation. Co-design also helps deal with the customization argument – rather than trying to design one size fits all, work with diverse users allows configurations which bring their particular set of needs and wishes into the equation.

These arguments take on particular significance in the context of public services like healthcare where the demand side is increasingly pushing for customization and tailoring of high quality services whilst the supply side is trying to deal with the economics of efficient delivery to meet the needs of these increasingly vocal stakeholders. Arguably the stage is set for radical innovation and the requirement is for new tools, such as those offered by design, to be deployed.

Open Door - an example from the UK healthcare sector

The UK, as many other countries, faces significant challenges to its healthcare system. A combination of complex drivers are coming together to create the conditions where the current systems will fail. Increasing life expectancy means more people will be requiring support for longer – and many of them will suffer from chronic diseases which are age-

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related such as diabetes and stroke which are particularly expensive to treat. Other lifestyle –linked problems such as growing obesity levels put further pressure on a system which already consumes around 10% of GDP – yet this burden will have to be borne by a shrinking taxpayer base as the population distribution ages. Expectations have risen since the inception of the National Health Service (NHS) in 1947 but continuing to deliver a broad-based package of care free at the point of delivery without incurring crippling financial costs is likely to become impossible in the years to come. Radical innovation will be forced upon the sector.

The NHS is already a huge and complex organization – the largest employer in Europe with the biggest purchasing budget. There is a complicated web of actors within the system – clinicians, managers, associated service providers, etc. – and it interacts with a very wide range of stakeholders – patients, carers, relatives, medical suppliers, funding agencies, local and national government, etc. Innovation in this system involves both diffusion of improvement innovations and radical new treatments and approaches such as new equipment or surgical techniques. But it is likely that the fundamental shifts and rising complexity facing the NHS will mean that there is increasing pressure towards completely different models which require reframing and the emergence/co-evolution of radically different alternatives.

For example the problem of chronic disease management is not amenable to simple single point solutions like a new drug or therapy – instead it requires system-level intervention involving patients, carers, drugs and other treatment regimes across a broad therapeutic range, healthcare funding, etc. But the incidence of this problem is increasing with an ageing population and with growing concerns about childhood obesity, etc. Estimates suggest that dealing with diabetes – one of the major chronic disease challenges – now costs the UK NHS 10% of its budget and the figure is likely to rise sharply.

The need to manage such change is widely recognised – the NHS itself is in the middle of a 10 year reform programme, the ambitions of which are set out in The NHS Plan (Department of Health 2000). There is growing recognition that existing perspectives, methods and approaches (and the underlying theories that drive them) cannot be relied upon to deliver the required change in the time and on the scale required (Bate *et al*, 2004). A key theme in the exploration of such radical alternatives is the need to incorporate new elements and perspectives in the frame and in particular to find ways to engage users much more actively.

This mirrors the wider moves towards what Von Hippel calls ‘the democratization of innovation’ and implies much higher levels of user-engagement in design and development of customized solutions matched to local and specific needs rather than a generic ‘one size fits all’ approach. At the same time such alternatives need to reflect the economic challenges of delivering high quality care in such specific configurations –

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there is a risk that innovations will revert to the traditional cost/quality trade-offs common to manufacturing operations management during the last century.

Searching for such radical solutions which engage users and which also deliver workable options requires the use of new tools and techniques and a number of experiments are underway which draw on design approaches. The following example illustrates the range of such work and the role which design approaches play within them.

The Open Door Community Hospital project

Sometimes innovation involves different combinations of elements in a new frame – an alternative *architecture*. The low cost airline example was not about new aircraft or airports but rather about focusing on an underserved market and developing a new configuration around that. In the process a new model emerged with very different characteristics which then migrated to the mainstream and fundamentally challenged the core business model of airlines in general. In this example the needs of an underserved population in healthcare are addressed via a radically different configuration which may have considerable relevance for the 'mainstream' approaches currently used in the sector.

The Open Door project was targeted at the Grimsby region in north east England – an old fishing town which has experienced a structural decline in industry and employment. Although some parts of the region are well-linked to the NHS there is a significant group with problems associated with social exclusion. For example the 2004 Indices of Multiple Deprivation show Grimsby in the worst quartile of local authorities, with 25% of the population living in the most deprived areas. The town is recognised as nationally the worst for education and skills deprivation, with 16% of young people not in education, employment or training. Over the last 2 years the town has also received a large number of economic migrants (estimates as high as 6,000). Their desire for work has put even more pressure on employability and distanced many from the sources of economic recovery. The number of 11 year olds drinking alcohol regularly is almost 4 times the national average; a quarter of Grimsby's 11 year old boys are drinking every week. There were an estimated 1,440 problematic drug users in the Grimsby area in 2005/6, less than half were in treatment at that time. Estimates suggest that these people may be responsible for as many as 1,500 children.

A consequence is that a girl in Grimsby's South ward aged 15-17 is 3 times more likely to get pregnant than a girl in a neighbouring ward whilst a man living in an area of high multiple deprivation will die 7 years earlier than the regional average. From the NHS perspective, there is a need to look for innovative solutions which can address the needs of this group – but again to do so in ways which 'customize' solutions to their specific context whilst avoiding the financial penalties normally associated with personalized medical care.

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The ‘Open Door’ project, originally commissioned by North East Lincolnshire Primary Care Trust, represents an attempt in this direction. A core principle was to reframe the problem and explore potential solutions via high levels of user input in design. It focused on vulnerable people who typically do not access mainstream or traditional health services on the basis that if the needs of this group were satisfied then the resulting model would also be inclusive of ‘mainstream’ needs. The groups involved were:

- Problematic drug users
- Homeless people
- Offenders (people leaving prison and youth offender institutions)
- Sex workers
- Asylum seekers & refugees
- Economic migrants
- People excluded from General Practitioner (GP) lists

The UK Design Council has developed a model of the user-centred design process involving four stages.

- opening up a problem and investigating all issues
- focusing on what appears to be the key issue
- opening up a number of potential solutions
- focusing, developing and delivering a preferred solution

This was used as a core template and a variety of research techniques were employed to gather views, issues and problems. These included:

- participant observation using a variety of ethnographic techniques to work with users to identify and understand their problems, issues, motivations and beliefs
- giving disposable cameras to members of target groups such as unemployed youths or asylum seekers to generate images which provide a perspective on life in the area
- creating a web page for on-line discussion,
- generating press articles,
- sending out cards asking for feedback, asking potential users for “gripes” about their past experience of health care. The cards also pointed people towards the website for further comment.
- workshops with service users and providers,

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- benchmarking visits in London, Manchester & Glasgow,

- interviews and observation with service users

The research was done by independent consultants and not by the core NHS project team to ensure a measure of objectivity. This work highlighted not only the core problem of particular needs for access to the health and social welfare system but also a strong sense of disempowerment and a lack of trust in the NHS amongst members of this user community. Dealing with this became a key challenge – lack of trust in the formal health system engendered an attitude of non-involvement until emergencies developed, at which point the health care system would be required to deal in crisis mode. As one interviewee put it, *the prevailing view is 'only go when it's bad'. So large numbers of people are disengaged from primary care and turn up at A&E in distress. They expect nothing or they expect everything right now'.*

Developing the approach involved extensive use of prototyping methods to engage users in co-design of the proposed solution. Of particular importance was the use of scenario techniques and exploration of the current and potential experiences of a number of key characters – roles – of people who would be involved in service provision and consumption.

The outcome of this design-led exploration was the development of a bid to establish a radically different kind of Community Hospital in response to a national tender process. Whereas the majority of bids were along 'conventional' lines involving buildings and a fixed location the Open Door approach was to take the hospital to the community – specifically the excluded members identified above. Using a location in an abandoned shop front along a main street in the heart of the declining part of town the plan was to create an 'open door' allowing users to drop in and access a wide range of services. Staff would be drawn in based on their availability to work odd hours and with a motivation to help this community, whilst equipment would be small and portable. In other words the hospital would be designed and configured around the needs and ideas of the user community which it was designed to serve.

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Challenges in Retail Innovation

Aspects of Innovation in Tesco plc's Market Entry into the USA

Case prepared by Michelle Lowe

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Abstract
This case examines the market entry of the UK's largest retailer (Tesco) into the USA. Tesco's launch of a new brand – Fresh & Easy Neighborhood Markets – in virgin territory is a bold move, notwithstanding the firm's considerable success with its overseas investment strategy (which within ten years has resulted in more than 50% of the firm's operating space being outside its 'home' market). It contextualises the study by taking a historical view of innovation in the retail industry, which reveals that generally - and certainly for the most part of the 20th Century – innovations have dominantly flowed from the US to the UK. The paper suggests that Tesco's US experiment is unusual both in terms of the innovatory aspects of its market entry and the reversal in that conventional direction of knowledge transfer. The Fresh & Easy story is then examined in terms of ten 'dimensions of innovation' involved in the market entry. The paper concludes by drawing out from these 'dimensions of innovation' a number of important issues for management scholarship raised by the study, stressing the need to incorporate insights from a wider social science literature.

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1. Introduction

"When I was the chairman of Tesco we looked very carefully at the North American market, and found that there was a significant difference in cultural attitudes to shopping over there. In the UK the development of own labels has been very strong indeed, whereas in the States, customers are very brand oriented and tend to regard 'own labels' as inferior products. It's a nonsense of course but as Sainsbury's and M&S have learned, it's a difficult job to change established mindsets, which is the reason why, after examining the situation in detail, we turned our face absolutely against going into the US."

Extracted from Ian MacLaurin (1999) *Tiger by the Tail: A Life in Business from Tesco to Test Cricket* Basingstoke: Macmillan p.107

"This is a tremendously exciting move for Tesco which will add a new leg to our international expansion. The United States is the largest economy in the world with strong forecast growth and a sophisticated retail market. It is a market we have researched extensively for many years and over the last year we have committed serious resources to developing a format that we believe will be really popular with American consumers…we've put a strong team together, led by Tim Mason and drawing on the wealth of skills and experience within the group. The first stores will open on the West Coast in 2007."

Tesco Chief Executive, Sir Terry Leahy quoted in Tesco PLC press release *Tesco to enter United States* 09/02/2006

On February 9th 2006, Tesco plc announced plans to enter the United States via the development of an extensive network of 'convenience format' stores to be launched in West Coast US markets in 2007. Following hard on the heels of a raft of investments in overseas markets in Central/Eastern Europe and East Asia (beginning with Hungary in 1995, and subsequently including the Czech Republic, Slovakia, Poland, the Republic of Ireland, Thailand, Taiwan, South Korea, Malaysia, Turkey, Japan and China), which had resulted in more than 50% of Tesco's operating space being outside its 'home' market, Tesco's latest venture was viewed as a step-change in both scale and risk profile of market entry.

Tesco's plan for the USA was to launch a network of what were subsequently named 'Fresh & Easy Neighborhood Markets'. These were billed as being modelled on its highly successful and innovative Express concept (Tesco plc press release 9/2/2006), but it soon became clear they would involve a new format somewhat larger than the Express stores. In the context of Sir Ian MacLaurin's view (above), that the United States is an extremely problematic market for retailers to enter - due in large part to differing cultural norms with regard to supermarket shopping (in particular the dominance of branded as opposed to own label products) - Leahy and his team appeared to many commentators to be over-confident about an investment that would essentially mean taking on global rival, Wal-Mart, on its home territory, together with two of the largest US supermarket chains Kroger and Safeway operating through well established brands in the US West Coast markets. Moreover, unlike earlier international projects that had involved majority partnerships (e.g. with CP Group in Thailand and Samsung in South Korea), joint ventures (e.g. with Sime Darby in Malaysia and Ting Hsin in China), or acquisition of established businesses (e.g. Kipa in Turkey and C-Two-Network in Japan), Tesco were considered to be bold in their approach to the US in the sense that "their expansion strategy…centre[d] on an unprecedented bid to establish both a store network and a proprietary distribution system at the same time" (Financial Times, 23 November 2006), without a partner to provide essential knowledge of local business conditions and consumer cultures.

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This case examines the innovatory aspects of Tesco's US market entry using preliminary analysis from corporate dialogue with the firm as well as a preparatory study of newspapers and documentary sources. To provide a context for this material, the paper begins in Section 2 with a historical view of innovation in the retail industry which reveals that this has generally – and certainly for the most part of the 20th Century – dominantly flowed from the US to the UK. Notwithstanding late 20th Century ventures by J.Sainsbury (Shaws) and Marks and Spencer (Brooks Brothers and Kings) – both of which were for various reasons abandoned by their parent companies – the paper argues that Tesco's US experiment is unusual both in terms of the innovatory aspects of its market entry, and the reversal in the conventional direction of knowledge transfer which has previously characterised the industry.

In Section 3 the paper then moves to a more detailed interrogation of the Fresh & Easy story, specifically providing an assessment of the various 'dimensions of innovation' involved in the new venture. Finally, in Section 4, the paper concludes by discussing a number of important issues that arise from these dimensions – including managing the contested relationship with financial markets, transformation of organisational structures and competencies of the firm as a consequence of transnational operation, and the culture of innovation powering Tesco's performance in the global economy. This discussion incorporates insights not only from management scholarship but also from a wider social science literature which it is suggested might provide fruitful research directions in terms of illuminating this important case study of retail innovation.

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2. The US, the UK and Flows of Retail Innovation

"Like so many British entrepreneurs after him [Simon Marks]…looked west for inspiration. And so, one chill February morning in 1924, he set sail from Southampton on the White Star liner Olympic, destined for America…[this] visit to the United States revolutionised his thinking…He met many retailers, although his notes reveal the name of only one – Sewell Avery of Montgomery Ward. Simon returned home bursting with new ideas and motivation."

Extracted from Judy Bevan (2001) The Rise and Fall of Marks and Spencer London: Profile Books p.25

"[On] 23 February 1950…Sainsbury's opened its first new shop since 1939…In an article in the JS Journal of March that year, Fred Salisbury, assistant general manager and a driving force behind the design and fitting-out of the new premises, talked up Selsdon as a 'turning point' in the company's history. Although small, this shop did indeed contain a number of innovations…Not least, Sainsbury's abandoned the wooden till for the thoroughly modern cash register – an American import, this was a major innovation in retailing in 1950."

Extracted from Giles Emerson (2006) Sainsbury's: The Record Years 1950-1992 London: Haggerston Press p.37

"The improvements since my last visit were beyond belief. There were the great names of American food retailing – Safeway, Atlantic and Pacific, Food Fare – all up to their neck in supermarket trading…There were gleaming palaces, well lit, roomy and clean. One of the most impressive developments concerned the packaging of goods. New materials, radical new designs, bright labels, clear price markings, and the women not only carried baskets, they pushed trolleys. It was utopia for a retailer…The noise from the cash registers was music to any trader's ears."

Jack Cohen quoted in David Powell (1991) Counter Revolution: The Tesco Story London: Grafton Books p.65

There is now a considerable literature which examines the transfer of retail innovations from North America to the UK (Alexander et al, 2005). In particular, a number of studies have focused on the import of self-service shopping technologies (du Gay, 2004), and the parallel development of the supermarket in 1950s Britain, and have examined the profound impacts of these imports on consumer cultures and the economics of mass consumption and selling in post-war Britain. (See Bowlby, 1997, 2000; Wrigley and Lowe, 2002, p71-76 for discussion of the original impacts of these innovations in 1920s/1930s America.) The transfer of the self-service/supermarket innovations into the UK occurred either indirectly via the emulation of US retail practices by UK retailers, or directly via the internationalisation of North American firms, given that "as supermarket retailing became more fully established in North America, leading players began to assess opportunities in Europe" (Alexander at al, 2005). Achieved by either route the innovations produced the same substantial productivity benefits of increased sales and reduced labour costs as had been observed in pre-war America (Adelman, 1959).

Significantly, of course, these twin North American imports were not the first time that important retail innovations had crossed the Atlantic to the UK. Indeed, well documented studies include that of Selfridge's department store which was opened on Oxford Street in 1909 by Gordon Selfridge, a self-made American entrepreneur (see Nava 1997, 1998)[1], and Woolworths 'Five and Dime' stores, established in Utica, New York in 1878, which sold discounted general merchandise at fixed prices, crossed the Atlantic in 1909, and survived as

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a chain in the UK even after the US parent company ceased trading in the late 1990s (Pitrone, 2003; Plunkett-Powell, 1999; Zukin, 2004).[2] Other notable American retail innovations – often overlooked – which made the same journey include trading stamps (often viewed as the precursor to the loyalty card – see Corina, 1971; Humby and Hunt, 2004), the shopping 'cart' or trolley, the cash register, automated check-out conveyor belts, refrigeration, air-conditioning, and plate glass windows (a vital component in what Bowlby, 1997 describes as the "dreamlike face of self-service"). It is also important to flag here the vital role played by 'executive travel' from the UK to the US throughout the 20th Century as highlighted in extracts from the company histories above, which allowed for the substantial gathering of information on innovation possibilities. Indeed the role of retail executives as what subsequently have been referred to as 'knowledge activists' (Brown and Duguid, 1998; Gertler, 2003) in the transfer and exploitation of new ideas in retailing, is a consistently important theme – one which will be returned to in the next section which documents the Fresh & Easy venture and highlights ten innovatory dimensions of Tesco's market entry into the USA.

3. The Fresh & Easy Story and Dimensions of Innovation

The first 'Fresh & Easy Neighborhood Market' opened in Hemet, 75 miles east of Los Angeles on 1st November 2007. As the *Financial Times* commented:

> *'Tesco…has staked its fortunes on an innovative new store that is about a quarter of the size of a traditional US supermarket, building on the success in the UK and Europe of its Tesco Express local stores. Some elements of the Hemet store will be familiar to UK shoppers. But the store also includes a "kitchen table" where a staff member heats up samples of prepared foods such as pizza and chicken curry. In a further innovation, all the check-out registers require customers to scan their own goods with staff on hand to assist'*
> (Financial Times, 4 November 2007).

Following the Hemet launch a wave of other Fresh & Easy openings occurred in late 2007 in Southern California, Las Vegas and Phoenix in both low-income and more up-market neighbourhoods with more following in 2008. Indeed, as Figure 1 shows, almost 150 planned development sites for Fresh & Easy stores could be identified from public documents.

Hand in hand with the laying down of this network of new accessible food stores – "designed to draw customers back to their local neighbourhoods" (Tim Mason quoted in Financial Times, 13 February 2007), Tesco also constructed a new 675,000 sq. ft distribution centre in Riverside County east of Los Angeles, and was accompanied in its move to the US by two of its leading British suppliers, Nature's Way Foods and 2 Sisters Food Group which established US operations to supply Fresh & Easy with fresh salads and pasta dishes and prepared poultry (Financial Times, 3 January 2007). Despite 'starting from scratch' however, with 'no brand recognition [and] no customers' (Business Week, 27 February 2007), the firm was bullish regarding its US invasion projecting it as a definitive 'launch' as opposed to a trial, and as one which had the potential of providing the retailer (which faces both a saturated UK market and repeated concerns regarding its home market dominance) with the prospect of a new and dramatic phase of its rapid international growth (Financial Times, 4 November 2007). Indeed, Tim Mason, CEO of Fresh & Easy described the venture as a '*transformational moment*' in the firm's history stating that:

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"The brand is designed to be as fresh as Whole Foods with a value like Wal-Mart, the convenience of a Walgreens and a product range of Trader Joe's…that leaves us with a specific edge in the market"
(Financial Times, 1 December 2007).

But on what basis could Mason and his compatriots be so confident in the likely outcome for Fresh & Easy? The answer to this question, this paper suggests, lies in the various innovative aspects of Tesco's market entry and it is to these that this paper now turns.

Ten innovatory dimensions of Tesco's market entry into the USA

"If Fresh & Easy is successful it will be the most exciting thing in retail bar none."
(Tim Mason quoted in The Times, 3 December 2007)

(a) Physical market entry preceded by on-line entry

A little documented fact regarding the Fresh & Easy venture concerns Tesco's acquisition of a 35% stake in the e-commerce operations of the leading US supermarket chain, Safeway, in the summer of 2001 for £16 million. Reported at the time to be 'almost identical' to Tesco's UK website (Zdnet.co.uk), the logistics of the Safeway online operation were based, as in the case of Tesco.com, on an incremental capital model which used in-store picking and the existing store-based infrastructure to serve internet customers (as opposed to the dedicated warehouses used by the ill-fated Webvan operation which filed for bankruptcy in July 2001 – see Murphy, 2003). Described by Tesco Chief Executive Terry Leahy, at the time of acquisition in 2001, as the 'perfect combination' to bring on-line grocery shopping to the world's largest market (E-Commerce Times, 25 June 2001), the mix of Tesco's know-how and the Safeway Inc brand was launched in Portland and Vancouver and subsequently expanded to the San Francisco Bay Area.

Tesco are understandably coy about the relationship between the joint venture with Safeway and their subsequent decision to develop their own US store network. However, Tim Mason in his previous role was involved in the Safeway link-up and that undoubtedly informed his – and other Tesco executives' – understanding of the US market. Additionally, the US market entry more generally clearly benefitted from experience gained via the Safeway on-line operation concerning 'merchandising range, price and innovation' (personal communication, interviewee A). Further, it is difficult to believe that Tesco's world class strengths in customer insight and customer loyalty-card data interrogation (Humby and Hunt, 2004) were not brought to bear on the Safeway venture and did not therefore play a role in the subsequent physical market entry as Fresh & Easy.

(b) Anthropologies of innovation

In his 2008 volume, *'The Innovation Acid Test'*, Andrew Jones discusses how ethnographic research "has become part of the landscape of innovation for many firms and associated consultancies". Referencing a *Business Week* commentary entitled 'Ethnography is the new core competence', Jones (2008, 63) draws attention to the "growing use" of ethnography within large firms as a way to develop a deep understanding of how people live and work in order to "peer into consumers' unarticulated and unmet needs and desires". At Tesco, Corporate Affairs Director Lucy Neville Rolfe is on record as stating:

"Spending time with people in their houses, looking in their cupboards and fridges and actually shopping with them is a great way to understand the market"

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(The Times, 3 September 2006)

and preliminary evidence from research interviews with executives (who were part of Terry Leahy's hand picked team who lived and worked in the West Coast for six months), substantiates this statement. Working closely alongside market research agencies, and with camera crews on hand to record events, the executive team visited a range of US consumers, shopped and cooked with them, discussed their food choices and queried their thoughts on diet and health, etc. The end result of these detailed investigations, in the Fresh & Easy stores which were eventually opened – as Tim Mason attests – is "an American store designed for American consumers" (Sunday Times, 10 June 2007), as opposed to the import of a British model. More generally, the team that conducted this research and developed/tested the new store concept (see (e) below), clearly had a wider role to play within the process of intra-firm knowledge transfer and 'organisational translation' involved in the US market entry. The innovatory aspects of the team's role as 'knowledge activists' is a topic which demands, and will be given, further attention as the research develops.

(c) Follower-supplier relations and integrated production/distribution networks

As part and parcel of its integrated US operations, Tesco established a large distribution centre in Riverside county east of Los Angeles which, according to Tony Eggs, Fresh & Easy's Property Director, provided "an excellent location for [Fresh & Easy] to commence [its] business platform in Southern California and the US" (The Business Press, 2 October 2007). But whilst the new centre is clearly vital to meet the demands of the rapidly established and dense store network that Tesco has developed, the more important aspect of this operation concerns the fact that "Tesco has [arguably] become a food manufacturer for the first time as part of its efforts to win over US shoppers" (Financial Times, 2 December 2007). At Riverside, the firm has built an 80,000 sq. ft 'food preparation facility' which has enabled it to manufacture a higher standard of prepared meals than is currently available in the US market. Forty percent of the ingredients for the facility are provided by Wild Rocket Foods and 2 Sisters Food Group, established UK suppliers of Tesco, which have followed the retailer to the United States, and this type of follower-supplier relationship widely discussed in the manufacturing sector (see Humphrey, 2003), represents an innovatory dimension of UK-US knowledge transfer in the retail sector. The integration of the store/distribution centre/supply chain allows for rapid and daily deliveries of fresh produce and ready meals, the hallmark of the Fresh & Easy brand, whilst the shorter supply chain within the new network facilitates substantial savings on marginal costs (Financial Times, 2 December 2007).

(d) Product innovation

The product innovations facilitated by the integrated food preparation/distribution facility in Riverside County are reflected at store level in markedly higher levels of own-label products at Fresh & Easy than conventionally found in US food retailing (Hughes, 1996; Cotterill, 1997)[3]. Indeed, over fifty per cent of the products stocked are own label, and the range extends from staples such as butter, sugar and tomato ketchup to 'wild blueberry muffin mix' and 'udon noodle salad' (Financial Times, 5 November 2007). Further, each Fresh & Easy store incorporates a kitchen table "with a crew member offering food samples and menu suggestions" (Financial Times 4 November 2007) – in an explicit attempt to build the image of the Fresh & Easy brand.

UK food retailing has long been acknowledged as having 'world class' skills in the chilled/prepared meals segment (Doel, 1996) and in the associated cool-chain distribution/logistics operations. However, this is the first time that this skill-set has been exported wholesale to the US from the UK. In the Sainsbury/Shaws operation during the

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1990s, a major effort was mounted to reposition the perception of own-label products among Shaw's customers away from the cheap/generic image traditional in the US and towards the high-quality innovative positioning of own-label 'retailer brands' in the UK. Own label levels achieved at Shaw's were significantly higher than in most US chains, however they did not involve the prepared meals focus, the integrated systems, or the follower-supplier involvement noted above (Wrigley, 1997).

(e) Trialling of formats

In the run-up to the opening of the first Fresh & Easy stores, the press reported that Tesco executives had concealed the firm's market entry plans by posing as film industry moguls and had built a film set in a West Coast warehouse (Business Week, 27 February 2006, The Sunday Times, 3 September 2006). In fact, the real Tesco operation carried out by Terry Leahy's hand picked group posted to Santa Monica between March and October 2005 was even more covert than the press's version. Posing as *International Research Resource Ltd*, complete with a fake website and - in some cases - false/slightly amended names, the group went to incredible lengths to ensure that they did not alert their competitors to their real intentions. Buying everything in cash and, if necessary, claiming to be holding a very large party, the group carefully built and then stocked a complete mock-up of a potential Fresh & Easy store inside a warehouse, in order to test out a range of possible formats and layouts on American consumers. The team even prepared chopped fresh fruit and ready meals to 'sell' in their dummy store. Not surprisingly, the press's misinterpretation owed much to the fact that the Tesco group took over an ex-import/export office which still had its old name over the door, rented apartments in Santa Monica "with Pacific views and film star neighbours" (personal communication, interviewee A), and paid in cash for the leasing of executive cars. Indeed local rumours depicted the Tesco group as porn movie producers! The leasing of the warehouse space for its more prosaic, but nevertheless vital, uses has continued after market entry, allowing Tesco to continually test and trial new selling possibilities.

As Dawson (1994) originally noted, protecting knowledge is a particularly difficult problem in the retail internationalisation process. Due to the inherently 'open' nature of stores and their retail offer, what Currah and Wrigley (2004) and Wrigley et al (2005) describe as *front region* emulation by competitors is the norm. As a result, transnational retailers usually focus on deriving competitive advantage from their *back region* spaces (i.e. from process-based know-how regarding logistics, supplier negotiations, own-label development, financial management, real estate strategy, and so on). Tesco entered the USA with what appears to have been an unusually determined attempt to additionally protect front-region knowledge, and market testing of consumer reactions to format, product and service innovations clearly has been, and remains, an important component of the Fresh & Easy story.

(f) Service innovation and employment issues

As highlighted earlier in this paper, service innovations taking place hand-in-hand with technological innovations – as was the case with the launch of self service and the supermarket in the first half of the 20th Century – have long been considered fundamental drivers of retail productivity. In the case of Fresh & Easy this association focuses around the issue of there being essentially no checkout staff, facilitating a "simple and efficient business model [that allows Fresh & Easy] to offer Wal-Mart prices in convenience store locations" (Telegraph, 5 December 2007). Indeed, *Time* magazine in a recent (2008) article entitled 'The end of customer service', drew the explicit comparison between the 'self-checkout' lanes at Fresh & Easy, and Clarence Saunders' first 'self-service' store, Piggly Wiggly, which

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opened in 1916 and 'revolutionized retail' – increasing efficiency and allowing substantial cost savings. What is fascinating about the Tesco/Fresh & Easy innovation is the fact that the firm has once again been extremely bold. Introducing what it terms 'assisted service' into all the recently opened Fresh & Easy stores is a high-risk strategy in a country renowned for its customer service offer. Simon Uwins, Fresh & Easy's Marketing Director, in his regular blog on the firm's website clarifies what is meant by 'assisted service':

> *"If you want to checkout yourself, you can, if you want help we'll provide it, and if you want us to do it for you, we will. In doing this, we've managed to create a whole new level of customer and staff interaction. The checkout operator is no longer part of the machine. Rather, our customer assistants are there to help, with the added benefit that our checkouts are open all the time...Our customers are overwhelmingly positive. We've managed to combine technology and people to enhance their experience."*
> (Simon Uwins, Talking Fresh & Easy blog - 'Where are the robots at Fresh & Easy?' Wednesday April 16 2008, 9.12 pm)

Only time will tell, of course, whether this major service innovation – simultaneously introduced with a new format and other allied innovations – will prove successful. However, it is salient here to point out that prior to the opening of the Fresh & Easy stores in 2007, Tesco made a similar investment in self-checkout facilities at its Bishopsgate Metro store in London. The Bishopsgate store now hosts 'the largest single-store self checkout system in Britain', and would seem to indicate considerable innovatory cross fertilisation between the UK and the US operations.

(g) Digital marketing

An important, but little discussed, feature of Tesco's market entry strategy has been its adoption of digital/'viral' marketing techniques to spread the message of its new brand. It is well documented that the concept of electronic marketing in the US is much further advanced than in the UK with 'weblogs' or 'blog marketing' being embedded in the culture of a number of Fortune 100 companies (Wright, 2006). Significantly, even the recent election of Barack Obama, is considered to owe a great deal to his use of Web 2.0 technology in order to build an online community of millions of people involved in his campaign. (The Times, 8 November 2008). Simon Uwins, Chief Marketing Officer at Fresh & Easy is extremely clear about the contribution of such digital marketing techniques to the firm's strategy, particularly in the context of the challenge of launching a new brand in virgin territory:

> *'Early on one of the things we said about establishing as a business was effectively to start having a conversation. You know, we are an unknown, so lets be clear about… what we stand for and then lets continually demonstrate that… we're living up to what we say we are doing… So that was a starting point in our, for want of a better word, strategy'.*
> (Uwins, personal communication, 2008)

As a result of Uwins' commitment to the importance of online conversations with Fresh & Easy customers and potential customers, he has posted a total of 60 blogs in the first eighteen months of Fresh & Easy's operations, (beginning in May 2007) covering issues such as Fresh & Easy own-label products, store openings, the firm's environmental/sustainable credentials, its understanding of and responsiveness to customers, and so on. The Uwins blog has solicited over 300 responses from consumers – also posted on the firm's website. For Fresh

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& Easy, the blog is designed to add clarity to the firm's mission and to demonstrate that the firm is living up to that mission. As Uwins has observed, digital marketing techniques allow for a much more fluid and fast moving exchange between the firm and its stakeholders:

> *'Obviously websites themselves, they're big things and changes on websites aren't that easy to make, and we felt there was a lot of stuff we just wanted to get out there quite quickly because one of the things we did notice quite early on here is that stuff written on blogs does get picked up quite a lot in newspapers ... in fact newspapers here, much more so than in the UK, are very internet based ... So for all these reasons we went 'Ok, lets first have a go at starting up a blog', because a blog is much faster moving, it would allow us to talk a bit, and it also felt very appropriate in this market.'*
> (Uwins, personal communication, 2008)

Uwins substantiates his decision to continue with the blogging 'experiment' with reference to the number of journalists who have picked up information on the firm from his comments. Moreover, he notes its importance in terms of recruitment - with the blog clearly being used by many people in the food retail industry to form an opinion of the firm's suitability. What is fascinating however, is the significance Uwins attaches to his blog (and, as part and parcel of that, his commitment to maintaining its authenticity), and also to the role played by a large number of other Fresh & Easy bloggers – essentially viewing blogging in the same manner as 'any other type of PR'. Indeed, Uwins notes that:

> *'We've started to talk to bloggers and that's working really quite well. We invite them to (store) launches and stuff... they're getting to know us... we've got lots of positive blogs written about us now"*
> (Uwins, personal communication, 2008).

As Tapscott and Williams (2006) more generally have argued, 'the blogging phenomenon points the way to the profound changes the new web will wreak on the economy'. In recognising the potential of blogging – and the need both to commit to and respond to its fluid and conversational nature – Tesco is arguably demonstrating its sophisticated grasp of the US consumer zeitgeist, and is once again demonstrating its considerable innovative credentials.

(h) Innovative locational strategies

A rather more well documented aspect of Tesco's operations in the US is the firm's stated objective to 'operate in all kinds of neighbourhoods' and to serve 'all kinds of people'. To that end, Fresh & Easy has opened in a range of different locations across the income/class/ethnicity range – for example, Compton in ethnically segregated South (Central) Los Angeles; Hollywood, a stone's throw from Mann's Chinese Theatre; and up-market Manhattan Beach. In particular, the firm has explicitly stated its willingness to locate in 'food deserts' – low income deprived communities that lack access to full-range food retail (see Wrigley, 2002 for background and definitions). That is to say, in neighbourhoods that have traditionally been underserved by the main US food retailers. In the Los Angeles metro area, that has involved opening stores in low income, primarily Hispanic/African-American, Compton, in poorly served Hemet in Riverside County and Glassell Park, in underserved but gentrifying East Rock, and involvement in a high profile mixed use scheme at Central and Adams Streets in deprived South Central. Finally, as the firm expands into northern California, it has plans to open in the low income inner city of Oakland and also in the

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Bayview-Hunter's Point neighbourhood of San Francisco. All of these developments demonstrate the firm's willingness to enter into urban regeneration partnership arrangements similar to those it is involved with in the UK (see Wrigley, Guy and Lowe, 2002) and to develop stores in areas which have long been neglected by rival food retailers. Although Tesco's contribution to these 'underserved markets' is clearly not altruistic, Fresh & Easy's stated commitment to serve 'all kinds of neighbourhoods', built on its parent's considerable urban regeneration partnership store experience in the UK since the late 1990s, is an important dimension of its market entry strategy and one which distinguishes it in important ways from both previous and contemporary practices of several of its US competitors.

(i) Consumer intelligence

Following the announcement of Tesco's impending US market entry, Britton Manasco, a journalist who has written for the *Harvard Business Review* and *The New York Times*, posted a blog on *Corante* which argued that Tesco would drive "an acceleration of intelligence-driven retailing in America" (http://customer.corante.com/archives/2006/02/09/british_invasion_the_tesco_test.php). Comparing the Fresh & Easy experiment to the earlier foray of Sainsbury into the USA, Manasco points to Tesco as "innovators in customer intelligence" and views this as "a serious competitive advantage". Much of Tesco's reputation in this regard relates, of course, to its superior data mining and marketing-focused usage of the customer data obtained from its sophisticated Clubcard operations. Indeed, Clubcard – the world's most successful retail loyalty scheme (Humby & Hunt, 2004) - has been viewed by some as being "as significant sociologically as it is commercially" (Gould, 2004). In the case of Fresh & Easy, however, which as yet does not operate a loyalty card scheme, the firm's consumer intelligence is built on Tesco's deep commitment to extensive and innovative forms of consumer insight research. In particular, Tim Mason and his team have gone to considerable lengths to understand the multicultural nature of the American consumer markets. This is evidenced not only by the anthropological work carried out pre market entry (see (b) above), but also in the firm's attempts to understand the complex nature of Asian and Hispanic household consumption in order to develop and position, in product-ranging terms, what Simon Uwins, describes as a "post melting-pot" offer (rather than a range oriented specifically for a single ethnic group). Uwins elaborates on the motivation for this:

> *Uwins: "We said we'd start with "post-melting pot" [ranging]… but we concluded that we probably ought to understand a bit more about what [Asian and Hispanic] regular products are, because the whole purpose is to provide regular products. And so we went into people's households … and went shopping with them and everything. The conclusion out of that was that actually "post melting -pot" is good because actually [those groups] hate the fact that in certain stores you get, like a separate Hispanic range. They think it's like you know…"*
>
> *Interviewer: 'A bit demeaning?'*
> *Uwins: 'Yes, exactly'*
> (Uwins, personal communication, 2008).

It is, of course, far too early to draw conclusions as to the appeal of the Fresh & Easy brand across the ethnicity spectrum. However, early indications appear to be that sales in ethnically diverse neighbourhoods - such as Compton - compare favourably with those in predominantly white neighbourhoods. Further research is currently underway to examine this issue in more detail.

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(j) Publicly betting the firm

The Fresh & Easy venture has been repeatedly styled as Sir Terry Leahy's "biggest ever gamble" (Sunday Times, 2006), with the CEO having a £10 million-plus bonus riding on the firm's US success. In a very public arena, then, Leahy has laid not only his bonus but also his reputation on the line, together with his very considerable achievement of repositioning Tesco as a transnational operation largely 'under the radar' of hostile financial market and public scrutiny. Additionally, market failure in the USA would risk considerable adverse impacts on the wider standing of the firm in international financial markets; despite investment in the USA being only a small fraction of either Tesco's planned annual capital expenditure programme, or its typical substantial annual spend on acquisitions in international markets.

This "public betting of the firm" in an experiment which has seen Tim Mason – often described as Leahy's right-hand man and a potential successor to the CEO role – "sent to the new world" (Observer, 9 December 2007) is a rather unusual dimension of the innovatory aspects of this market entry. Indeed, most previous retail internationalisation has been characterised by firms stressing the limited nature of the risk and the potential reputational loss being assumed. Mason the ex-Marketing Director, who is credited with pioneering the development of Clubcard and the 'Every Little Helps' tagline (see Humby and Hunt, 2004) has, for a long time, been identified with major strategic investments in the firm. His role as CEO of Fresh & Easy is arguably signal therefore not only to the critical position that the United States operation is playing in Tesco's long term strategic development but also in its leadership succession planning.

In the context of this 'betting of his reputation' by the CEO, Tesco executives are publicly confident that Sir Terry has a fundamental knack of "coming up with an idea that other people have perhaps had but have said is impossible" (personal communication, interviewee A) and "of making difficult situations work when other people can't see it". Leahy himself is clearly aware of the high risk strategy both he and the firm are adopting but argues:

> *"We've carefully balanced the risk. If it fails it's embarrassing. It might show up in my career [and] it'll cost an amount of money that's easily affordable by Tesco – call it £1 billion if you like. If it succeeds, then it's transformational."*
> (Leahy quoted in The Economist, 21 June 2007)

4. Discussion

Despite becoming more widely known and discussed since the mid 2000s, the rapid transformation of Tesco into a globally significant transnational corporation which, following entry into the USA, has more than 60% of its operating space outside its home market, remains a surprisingly poorly appreciated story of both corporate transformation and successful performance by a UK company in the global economy. By 2007/8 not only were Tesco's rapidly expanding international sales (over £10 billion per annum producing $600 million of operating profit), consolidating the firm's position as the world's fourth largest retailer, but also its skills as an international operator were allowing it to succeed in markets where the two leading transnational retailers (Wal-Mart and Carrefour) were conspicuously failing. South Korea, now Tesco's second largest market after the UK, provides an example, with both Wal-Mart and Carrefour being forced to exit the country in 2006. Above all, the story of Tesco's corporate transformation over the decade from the mid 1990s is fundamentally one which illustrates aspects of what NESTA (2008) recently described as

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'hidden innovation' in the UK services industries. Three dimensions of that story and its consequences demand attention.

a) Managing the contested relationship with financial markets

As Wrigley and Currah (2003 p.237) note:

> *"achieving global reach by a retail transnational corporation is a highly contested process – not only in terms of the competition which must be faced in the markets entered, but in addition, and often more decisively, in terms of the struggle between the firm (or more precisely its management) and the suppliers of its finance".*

The greatest achievement of Leahy's strategic realignment of Tesco into a transnational corporation, has been to retain support of the financial markets whilst rolling out the very considerable year-on-year capital investment programme in the emerging markets of East Asia and Central/Eastern Europe required to engineer that transformation. Very few retailers (and in practice, no other UK retailer) have been able to achieve that feat. Essentially, financial markets have tended to become increasingly concerned about the negative impacts of international investment on home market performance, particularly if that performance is perceived to threaten the strategic credibility of the firm, and have demanded a core (home) market refocus. Sainsbury's forced exit from the USA after more than a decade of sustained investment building up a well-positioned and profitable business in New England (Wrigley, 2000; Emerson 2006) provides a classic example, and is regularly misinterpreted as deriving from an inability to operate successfully in the US market.

Tesco's ability to produce sustained market-leading growth in its core UK market, whilst simultaneously funding its international expansion, has been the key element. However, Tesco has also employed considerable skills in 'managing' financial market expectations and retaining market support - for example via a willingness to engage with, and attempting to shape, financial market agendas and 'narratives' (O'Neill, 2001) about the firm, in the same manner as it deals more widely with Government and regulation (see Pal and Medway, 2008). The US market entry provides an enormous test of those skills and, as noted above, there are significantly enhanced reputational issues associated with the US venture, demanding innovatory responses from the firm in managing those relations with the financial markets.

b) Transformation of organisational structures and competencies of the firm as a consequence of transnational operation.

As Coe and Wrigley (2007) stress, there are important reciprocal impacts on the organisational structures and competencies of transnational retailers themselves which derive from operating in, and transferring knowledge obtained from, the host economies/societies of the markets entered - markets which often have very different institutions, cultural and regulatory characteristics. Since the mid 1990s, Tesco has clearly become a very different kind of organisation as a result of operating across such institutional/cultural/regulatory divides, but surprisingly little is known about that transformation or of the processes and spaces of learning (Amin and Cohendet, 2004) involved.

What evidence is available suggests that the mechanisms of organisational learning involved in the transformation of the firm have involved genuine 'two-way' flows of knowledge and expertise through Tesco's intra-firm networks. 'Top down' mechanisms of knowledge transfer of expertise (both operating skills and employees) from the UK to its international subsidiaries in the key areas of retail skills, commercial and sourcing capabilities, marketing and consumer focus, and human resources are clearly evident.

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However, there is also important evidence of 'bottom up' mechanisms of knowledge and expertise flowing to the UK and also around Tesco's international operations via these intra-firm networks (for an extended discussion see Coe and Wrigley, 2007).

The transfer of emerging senior management talent across international operating environments is also clearly of profound importance. Careers built within the context of expanding transnational companies have the capacity to deeply inflect the organizational structures of those companies. This is illustrated, for example, in the organisational consequences of the recent (2008) move of Jeff Adams, the American-born CEO of Tesco's business in Thailand to Fresh & Easy in the US to become second in command to Tim Mason (Financial Times, 15 March 2008).

c) The culture of innovation powering Tesco's performance in the global economy – potential research directions?

As Tellis, Pradhu and Chandy (forthcoming) and others (e.g. Schoenberger, 1997) have argued, 'the internal culture of the firm [comprising a number of quite specific attitudes and practices] may be the most important driver of innovation'. The rapid expansion of Tesco plc over the past decade reflects this - arguably having been built on a deeply embedded culture of innovation and adaptability which permeates into the structure of the firm. More specifically, Tesco's adaptability in the international markets it has entered is widely acknowledged as one of its key competitive advantages (Observer, 11 November 2007). As a result, there may be considerable mileage in examining the evolving Tesco/Fresh & Easy venture under the lens of Tellis et al's conceptualisation of 'radical innovation'. It is important to point out, however, that many of the attitudes and practices discussed by Tellis et al appear to be more easily applicable to the manufacturing or business services sectors and it may be necessary therefore to modify these in line with the very specific practices of innovation in retailing which, as Hristov and Reynolds (2008) suggest, are 'poorly understood and inadequately measured'.

In addition, perspectives from the recent 'strategy as practice' literature may also bear fruit.[4] Developing what he terms 'the implications of the sociological eye for the conduct of strategy as practice research', Whittington (2008) proposes a number of 'touchstones' or 'orienting devices'. These resonate with the dimensions of innovation at Fresh & Easy highlighted in this paper. In particular, what Whittington terms 'searching for connections and relationships', 'pursuing irony', problematizing performance' and 'respecting continuities' are potentially useful dimensions with which to examine the practices of innovation evident in Tesco's US market entry, and these touchstones/devices will be borne in mind in the subsequent development of the project.

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Footnotes/Endnotes

[1] Selfridge had previously been a key figure in the transformation of Marshall Field's Chicago store into 'one of America's most innovative department stores' (Lancaster 1995; Wrigley and Lowe, 2002).

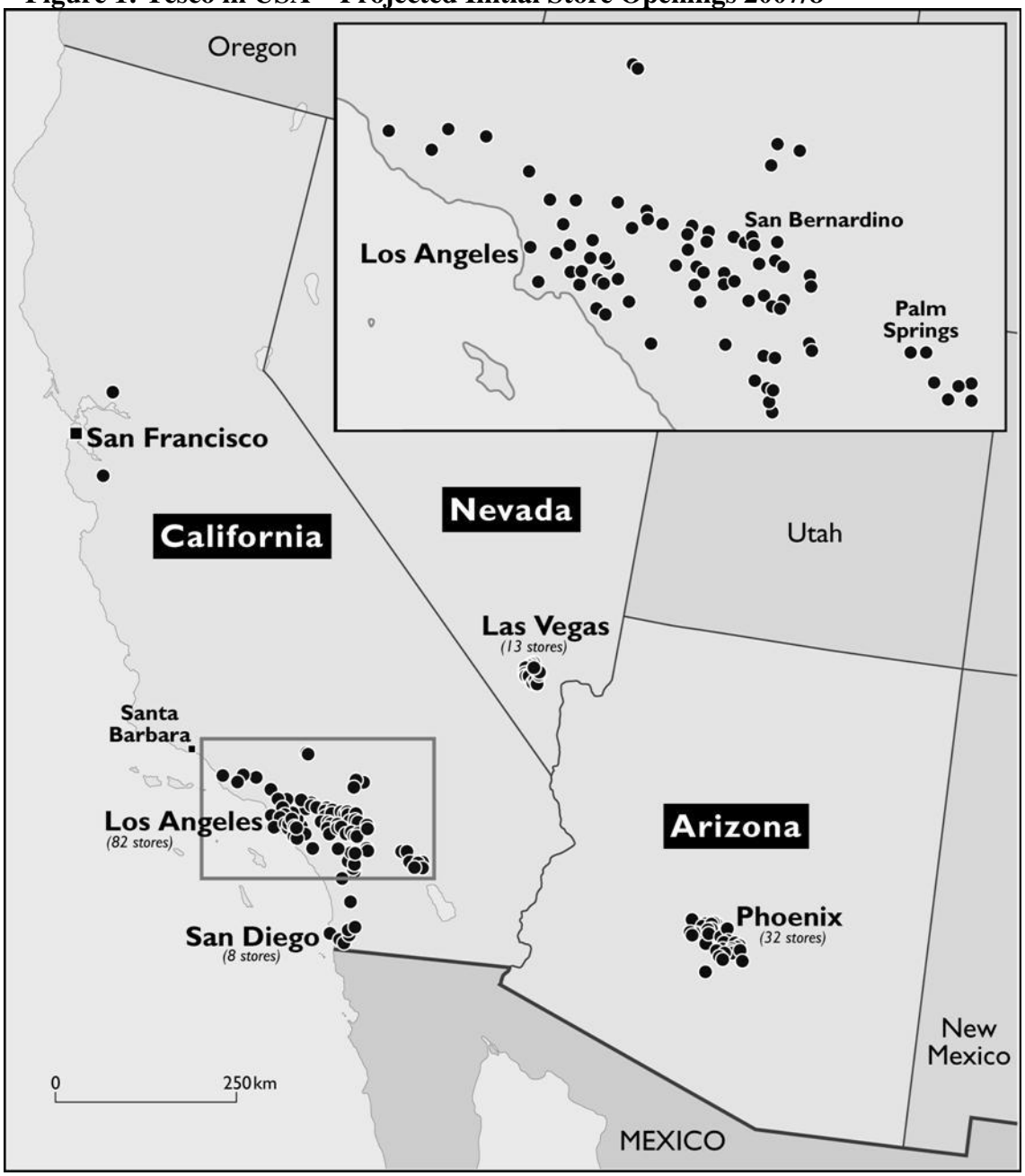
[2] Woolworths in the UK entered administration at the end of November 2008, with debts of £385 million (The Times, November 27th 2008).

[3] There are some notable exceptions e.g. Trader Joe's – which has about 80% of its goods 'own' or 'private label' and Whole Foods, which has developed its own 365 brand.

[4] It is salient to point out that Tesco plc is one of Johnson Yip and Hensmen's 'successful strategic transformers' identified in their recent AIM funded project and there will doubtless be important revelations from that research that will need to be triangulated with the evolving perspective under discussion here.

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Figure 1: Tesco in USA – Projected Initial Store Openings 2007/8



Source: Financial Times November 6, 2007

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Threadless

Clothing is a huge industry and a daunting prospect for a new entrant. On the one hand there are large players with scale economies, sophisticated logistics, low labour cost assembly operations and advanced retail and distribution networks. On the other there are boutique, fashion-led houses with an emphasis on design, quality and customisation – and with a clientele prepared to pay high prices for these attributes. Yet a small US start-up – Threadless.com – has confounded those sceptics who felt there wasn't room for any new player, let alone one with no prior experience of the industry. Co-founders Jake Nickell and Jacob DeHart started the company with $1,000 in seed money in 2000 although the idea was still more about building a web community than a major clothing business. *"It was just a hobby, a way for people to get their artwork out,"* Nickell commented in a recent interview. By 2002, the hobby had surpassed $100,000 worth of T-shirts and attracted more than 10,000 community members, mostly artists in their teens and 20s. The user base has continued to grow from 70,000 members at the end of 2004 to more than 700,000 today. Sales in 2006 hit $18 million -- with profits of roughly $6 million. In 2007, growth continued at more than 200 percent, with similar margins. (Chafkin 2008)

Nor was this a niche entry, trading on a specialised fabric or design or access to a boutique market. It has succeeded in one of the mainstream areas of clothing – the T-shirt. Amongst the most popular items worn on the planet, T-shirts as an overall business are huge – but making a successful business out of their design and manufacture can be a nightmare. First there is the design problem. Although there is a market for plain white T-shirts the real business lies in T-shirts with something on them – colours, pictures, slogans – essentially something which allows the wearer to express him/herself and which differentiates the T-shirt. And the problem is that different people want different designs – so to match the variety of designs any new entrant would normally need to recruit an army of specialist designers.

The problem doesn't stop there – whilst people undoubtedly want different deigns the business depends on picking those designs which will have wider popularity. Otherwise the risk is that you will make a batch of, say, 50,000 T-shorts only to find there is no market for them. So another issue in starting up in the business is recruiting another army of market researchers to enable a better forecast of what is likely to sell.

Threadless didn't worry about these problems when it started up in 2000. In terms of the design problem their response was not to hire their own designers but rather to use the principle of 'crowdsourcing' – essentially engaging potential users in the process of designing their own T shirts. On their website the company runs a weekly competition to which anyone is invited to submit designs. These could come from an 80 year old grandmother, a 3 year old boy or a professional textile designer. It doesn't matter – the

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model is simply to run a competition and use this as a way of attracting a high volume and variety of ideas.

That approach offers a way of dealing with the designer problem – but what about the market research? How would they know which of the designs might be a big seller and which a flop? Once again rather than try and second guess they make use of crowdsourcing – asking the web-based market place of visitors to their site which of the designs on display are popular. There is, for each design, a simple voting scale running from liking to loathing the design in question. Using this voting system allows Threadless to gauge quickly which ideas are popular – and therefore which ones to commit to producing.

They receive around 800 submissions each week for the competition and, using the above system, pick the most popular 4 and put these into production. They make a batch of between 50 and 60,000 T-shirts – and already have many pre-sold because one option on the voting page is a tick box indicating the voter would buy the T-shirt if that design were available.

Designers of the winning entries receive $2000 plus $500 for every reprint. But the appeal of Threadless is less about money than recognition - *"It wasn't so much the money*," says artist Glenn Jones, who won $150 in a contest in 2004, at age 29. *"It was how cool it was to get your shirts printed*."(Chafkin 2008)

The company began as a typical internet start-up, requiring little capital or resources and involving only a handful of people – all the manufacturing etc is contracted out. But their success with the approach has enabled them to build a larger business based on the core principles of crowdsourcing and community building. Their experience is typical of a growing movement around 'mass customisation' in which users play a much more significant role in the front end of the innovation process. Companies like Muji in homewares, Lego in toys and Adidas in footwear are all making extensive use of the approach which owes much to the principles of user-led innovation first set out by Eric von Hippel (Von Hippel 2005).

Threadless have grown the customised community through targeting key niches – designs by young children for young children, professional and limited edition artist T-shirt designs, etc – but retaining the sense of user involvement in the process. On occasion, special contests—known as "Loves Threadless"—run in association with various sponsors. These contests set a theme for designs, with a selection of additional prizes being awarded to the chosen winner.

The success of the core Threadless concept has also led to several spin-off projects applying the model to neckties, accessories like wallets and bags and wallpaper, and their designs are also available as limited edition prints. They run parallel sites to support these

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like NakedandAngry.com, OMG and 15MegsofFame.com (in which the crowdsourcing/voting model is applied to mp3s of aspiring musicians with the potential prize of a gig in a live Chicago venue.(Luman 2005) They have also opened a retail store (2007) in Chicago where in addition to seeing and buying products there is also a design gallery and workshop where users can attend design classes. In 2008 they launched a weekly video segment called Threadless Tee-V on their website.

For more information, see www.threadless.com. There is also a good description of the company plus many other examples on Frank Piller's website, www.masscustomization.de

See also:

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