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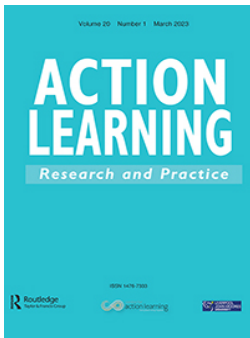
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## Finding innovation opportunities in SMEs through futures and foresight learning: an action learning approach

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# Finding innovation opportunities in SMEs through futures and foresight learning: an action learning approach

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## ABSTRACT

Small and medium-sized enterprises (SMEs) have been particularly challenged by the Covid pandemic, the climate crisis, war and political tensions including the fuel price crisis. Strategic responses to crisis including cost-cutting as retrenchment in the short run, debt financing to preserve the status quo and exit. However, perhaps the most positive is to innovate for renewal. The paper considers how working with an approach to futures and foresight learning, three different SMEs during the Covid pandemic and beyond formed action learning groups and were able to find future opportunities from which innovation ideas for action in the present could be undertaken. The paper considers the meaning of innovation including what Revans saw as an 'Innovation Paradox' as a gap between invention and innovation. In SMEs, the importance of informal innovation and an innovation orientation are identified. The meaning futures and foresight learning is considered and the focus on the identification of new opportunities for products and services, delivered by a process of action learning. Findings from three SMEs are presented from meetings that took place during 2021 to 2022, when Covid restrictions were partly in place. They show how each programme begins with opportunity questions for the future which then lead to ideas after a consideration of trends and patterns. Further methods of futures thinking are presented which allow further ideas to be developed for innovation. In each case, ideas are selected for business planning after approval. Discussion of the findings considers the importance of futures and foresight learning combined with action learning for SMEs to become more strategic, future-oriented and creative in seeking opportunities for innovation.

## ARTICLE HISTORY

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## KEYWORDS

Small and medium-sized enterprises; futures and foresight; action learning research

## Introduction

Most organisations over the last decade have had to consider and reconsider how they respond to various challenges including the COVID pandemic, the climate crisis, war and political tensions including the fuel price crisis. In the UK, there is the added

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uncertainty caused by the departure from the European Union (or Brexit).<sup>1</sup> Small and medium-sized enterprises (SMEs) have been particularly challenged. For example, many SMEs were not prepared for the COVID pandemic and faced resourcing difficulties (Eggers 2020). Most recently, many SMEs have been facing significant rising energy costs leading to calls for further significant government support to ensure survival (Yedroudj 2022). Nevertheless, many SMEs are said to possess particular strengths and capabilities to respond to crises (Dahles and Susilowati 2015). Wenzel, Stanske, and Lieberman (2020) found a number of strategic responses to crisis including cost-cutting as retrenchment in the short run, debt financing to preserve the status quo and exit. However, perhaps the most positive is to innovate for renewal. In particular, an innovation orientation is seen as crucial (Vargo and Seville 2011) and this involves an ability to identify new opportunities (Beliaeva et al. 2020) and Clauss et al. (2021) argue that even if a temporary stance is adopted, it can lead to new revenue streams.

The aim of this paper is to consider how working with an approach to futures and foresight learning (FFL), three different SMEs during the COVID pandemic and beyond formed action learning groups and were able to find future opportunities from which innovation ideas for action in the present could be undertaken. The paper begins with an exploration of approaches to innovation in SMEs, followed by a brief consideration of FFL. The paper then explains the approach of delivering FFL that focuses on new opportunities through action learning. Results are then presented followed by a discussion and conclusions.

## Innovation and SMEs

Josef Schumpeter (1934) made a key distinction between a new idea for how to do things – invention – and turning an idea into practice – innovation. New ideas have to be made to work in technical, commercial and/or user satisfaction of improvement terms (Tidd and Bessant 2018; West et al. 2003). Interestingly, Revans (1971) recognised the potential for a gap between invention and innovation, which he termed as the ‘Innovation Paradox’. He argued for the importance of action learning to resolve the gap. Crucially, for an idea to make a difference in the world, it needs a combination of knowledge, capabilities and resources that lead to implementation and consequent exploitation. Further, as part of its implementation and exploitation an original idea can be improved as the results of its working with those affected both within an organisation and customers, suppliers and others outside (Kline and Rosenberg 1986). Ideas that lead to implementation and exploitation can be radical in terms of processes or products and service, relating to both technological and non-technological aspects, but they can also involve gradual improvements that occur incrementally if they can be grasped (Edler and Fagerberg 2017; Love and Roper 2015).

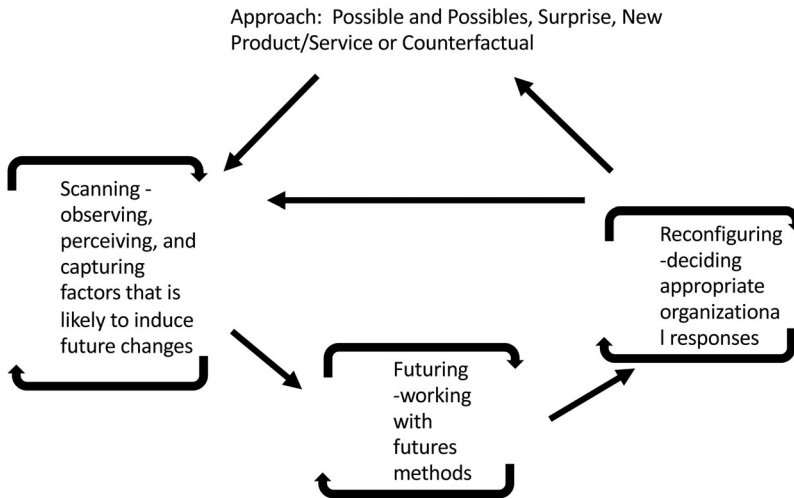
In SMEs, informality is a well-recognised feature of the approach to innovation (Goffee 1996) which has also, to some extent, been recognised in policy-making (BIS 2012). It is argued that innovation can provide an SME with significant benefits, such as an ability to focus on niche markets based on a more limited variety of products and services. SMEs are also able to benefit from quick decision-making and flexibility in risk-taking in their response to new opportunities (Love and Roper 2015). However, it is recognised that informality can also lead to failure to plan and devote resources to innovation even if new ideas are identified. This can also prevent the development of capabilities

in certain areas and a limitation on the emergence of a new product development (NPD) process (Iqbal and Suzianti 2021). The ambiguity towards innovation provided by informality might be particularly pertinent to family-owned SMEs which, in the UK, make up over 80% of all businesses (IFB 2021). Calabrò et al. (2019) in their systematic review of literature relating to innovation in family firms highlight positive features such as the long-term commitment to sustaining a business over generations and the attention to creating trust based on shared values. However, family owners might also generate risk aversion as part of their efforts to maintain family control and unwillingness to fund investment. In particular, family firms might eschew formality which could require more experts and/or professionals that threaten the family's belief about personal responsibility, succession and family ownership (Stewart and Hitt 2011). Further, during and after the COVID 19 crisis many family firms had to draw on family resources as survivability capital to ensure the chances of continued existence beyond the crisis (Żukowska, Martyniuk, and Zajkowski 2021). A key limitation in many SMEs is the limited available resources including qualified expertise to manage the innovation process. This is a feature of informality where there is an absence of a Research and Development department which is more common in larger organisations (Adla, Gallego-Roquelaure, and Calamel 2020; Mohen and Roller 2005).

Whether an SME adopts innovation formally or informally, research suggests that history and culture can create a positive approach that can be summarised as innovation orientation defined as a '... tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, technological processes' (Lumpkin and Dess (1996, 142). Consequences of innovation orientation include the attraction of specialised staff including highly qualified graduates and postgraduates (D'Souza-Mathew et al. 2015), the encouragement of commitment among existing staff (Zhou et al. 2005) and adopting a more strategic approach to business including setting goals and allocation of budgets and resources (Rosenbusch, Brinckmann, and Bausch 2011). In family firms, the innovation orientation can be influenced and transmitted across generations by the shared history and stories of success (Jaskiewicz, Combs, and Rau 2015). Research by Kammerlander et al. (2015) points to the importance of stories that are shared within families that foster innovation and feed behaviour that legitimises decisions and show how the family can work together. Innovation orientation is similar to the idea of innovation capability presented by Olssen et al. (2010) as a feature of learning capabilities which are required to respond 'to a change in the environment' (169).

A key challenge to SMEs is the fear of how innovation can disturb what is valued and protected. That is, what might have been innovative in the past continues to be exploited in the present. SMEs need to embrace both exploration for new products, structures and configurations, while also maintaining an exploitation of existing products and services, and ways of working and organising; they need to become ambidextrous (O'Reilly and Tushman 2004). Research suggests that SMEs that are ambidextrous have a stronger innovation performance and this requires ambition and capability (Colclough, Moen, and Hovd 2019). However, to achieve what has been referred to as innovation ambidexterity requires SME managers to reconcile various tensions such as financial risk, and too much growth and added pressure at work leading to the loss of skilled staff (Hughes et al. 2021; Laforet 2011). For this to occur in SMEs, owners, managers and others need accept risk-taking and promote values, attitudes and behaviours that create a supportive culture for the enactment of new opportunities that can be identified. In addition, there is a

# Futures and Foresight Learning



**Figure 1.** FFL.

need to learn new skills and be receptive to information from different sources. As will be demonstrated, action learning can play an essential part in this process together with FFL. Revans (1971) pointed to the need for learning and knowledge to be shared in the process of developing ideas and implementing them ‘almost entirely’ (90) in the situation of changes to practice. Pedler and Brook (2017) suggest that the quality of any innovation activity relies on how well people engage with this process, relying on both a technical ability but also the values and beliefs of those involved (Bourner 2011).

## Futures and foresight learning

Futures and foresight have had a variety of definitions and meanings but the version used here is based on Micic (2010) and is presented by Gold et al. (2022) as ‘an ongoing learning process to find predictable, probable, possible and/or a variety of long-term futures’. Whilst most futurists would avoid use of the term prediction as a feature of forecasting, preferring instead to focus on a range of possibilities based on a range of factors that can shape the future (Martin 2010), the preference here is to view FFL as a dimension between predictions of the future and what can be imagined in the future. In particular, the inclusion of prediction in FFL allows consideration of the use of analytics and the formation of algorithms that can create processes of machine learning. In contrast to prediction, it becomes possible to consider a variety of different futures through imagination. Such futures may be more or less desirable, focus on surprises, or even counterfactual. In this paper, we consider the identification of new opportunities for products and services (Micic 2010). The process becomes a learning process shown as Figure 1, following Gold et al. (2022).

The learning cycle becomes evident by working with three key FFL processes as stages presented by Fernani et al. (2020) of:

- (1) scanning – the detection of trends, patterns and discontinuities by considering data from different sources by setting questions
- (2) futuring – using futures methods to produce outcomes; and
- (3) reconfiguration – linking the outcomes from futuring to connect to strategy and then action.

Once the focus has been selected, it became possible to follow the stages. Each stage is cyclical with learning becoming possible within a stage. For example, in the scanning stage, consideration of data to reveal trends and patterns can lead to more questions and adjustment to initial questions. In the futuring stage, participants can be introduced to a range of tools and methods which have been developed by futures practitioners and academics over time. This can include such methods as scenarios, projections, models and simulations. Methods to consider new opportunities will be demonstrated in the cases below. As successive stages are completed over time, this allows FFL to become embedded and institutionalised within an organisation. Research by Rohrbeck and Kum (2018) has demonstrated the impact on performance and results of organisations that do this.

### *FFL and action learning*

The formulation of FFL as a learning process also suggested its suitability to delivery by action learning. This represents a radical change to the work of futurists who have often faced a difficult issue relating to how their work can become accepted in organisations. Hines and Gold (2015) refer to problems including lack of clarity of meanings of terms in FFL, the episodic use and confusion with strategic planning, and a climate within organisations for short term decision-making and focus on operational matters. They present a model for establishing FFL by working with internal champions who could facilitate the path. Gold and Pedler (2022) show how by working in this way, an action learning approach could be used to deliver FFL by using the stages and cycles shown in Figure 1. This allows different methods to be introduced within meetings at the various stages. The approach here is a form of task-based action learning (James et al. 2020) where there is an amount of content to be delivered by the facilitator but in response to questions posed by learners who then apply key methods of FFL as a response to tasks between meetings.

### **Methods**

As we suggest above, FFL can be considered in a variety of ways along a dimension from prediction to imagination. Further, as the move towards imaginative approaches, following Micic (2010) and Castoren, Rivera, and Gonzalez (2013), the focus can turn towards finding opportunities for innovation. As Micic explains, the purpose of using FFL for finding opportunities is to ‘develop as many future opportunities as possible through more or less systematic and unlimited creative thinking’ (127). The methods of FFL provide a degree of structure but learners can create their own content and responses.

A programme of FFL to identify opportunities for innovation was designed and three SMEs agreed to participate. The SMEs were located in a different parts of the world which set the conditions for delivery of FFL as follows:

**Table 1.** The FFL Programme.

1st Meeting	Introduction to future opportunities and consideration of purpose. Consideration of key trends for the business Action: Posing of Opportunity Questions (OppQs) for 2031/2 for scanning
2nd Meeting	Review OppQs and results of scanning Revision of OppQs Action: Respond to OppQs
3rd Meeting	Review findings Action: Surface key assumptions
4th/5th Meetings	Completion of Future Opportunity Matrices Reveal key ideas for innovation Action: Plan preference for implementation

1. Firm A – an architectural professional services firm in the north of England
2. Firm B – a digital services firm in South Africa
3. Firm C – an engineering firm in Yorkshire, UK.

Each SME had worked with the authors previously and agreed to allow us to apply the FFL process and make use of findings as we proceeded. To support each programme, we established a digital infrastructure to allow participants to share findings with each other and with us. This process of collaboration both within and between meetings made each programme an example of action learning research (ALR) (Raelin 2015) which supported the emergence of ideas for action in innovation. In addition, given the restrictions of the COVID pandemic and the location of one of the firms, we also were required to mediate our meetings for much of the time through the use of appropriate technology. This created a form of Virtual Action Learning (Dickenson, Burgoyne, and Pedler 2010).

Importantly, each stage of the FFL cycle allowed data to be generated by learners which could be analysed to produce findings considered relevant and important for presentation within meetings to allow further consideration for action.

With each SME, there were 4/5 meetings which were held every 5/6 weeks. The meetings all took place during 2021 and 2022 during a period when COVID restrictions were in place and then relaxed. Table 1 shows the flow of the programme.

In the next section, we provide findings from our work with the three SMEs and how they worked with FFL to find opportunities for innovation.

## Findings

We present findings from the three SMEs, each completing 4 or 5 meetings following the stages shown in Table 1. In what follows, we provide findings from all firms with a fuller consideration of details of implementation for Firm A, followed by a briefer focus on outcomes for Firms B and C.



**Table 2.** Examples of OppQs for 2031.

- Will Firm A be able to offer a service that guides a developer through from the initial investment through to the sale and disposal of a project?
- Will Firm A design and develop virtual environments in the Metaverse
- Are Firm A going to enter the digital marketing industry as a discipline with a focus on property?
- Will Firm A be pioneering with the design and construction of the future of our built environment and see the same levels of success as the likes of Foster and Partners?
- Will the Firm A academy evolve and become a certified supplier of certification and qualification?
- Will Firm A add coding and data analytics (new skills) into required job descriptions?
- Is there an opportunity for our staff to become self-promoters and influencers – training required: Drama School, LAMDA?
- Could Firm A offer landscape architecture, an engineer service, measured surveys or an Online app for interior modelling and ordering as additional service?

### Firm A

Firm A is a medium-sized architectural professional services partnership located in the north of England with offices also located in London. With over 50 partners, associates and staff, Firm A continued working throughout the COVID pandemic with many interactions occurring virtually, including the first work with FFL. However, once it was considered safe to do so, meetings were held face to face, with those in London attending virtually. Nine participants were drawn from the three sections of the firm – Architecture, Interior Design and Building Consultancy.

At the first meeting, held virtually during 2021, after the introduction to future opportunities, the group consider some of the key factors and trends affecting Firm A, including:

**Table 3.** OppQs to Oppls.

OppQ	Oppls
Will Firm A be able to offer a service that guides a developer through from the initial investment through to the sale and disposal of a project?	Would be very positive but would it overburden us? Would need to widen the team. And also a large initial investment but the potential opportunities would be large if successful. What if Firm A becomes the developer. Close ourselves off from others potentially? Lack of collaboration and knowledge sharing?
Will Firm A design and develop virtual environments in the Metaverse?	Way the industry seems to be going. Why shouldn't architects/Firm A be part of this? Almost silly not to look into it. It seems to be the future with massive investment from likes of Facebook etc. Analogy with contactless/till free shopping. Who would the client be?
Could Firm A offer measured surveys as an additional service?	Yes, cross-selling more services to existing clients.
Is there an opportunity for our staff to become self-promoters and influencers – training required: Drama School, LAMDA?	Yes, more confidence building and soft skills ... more out of the box training like improvisation etc.
Will the Firm A academy evolve and become a certified supplier of certification and qualification?	Education is moving towards more experience-led. Could do this now almost as businesses are partnering with universities. Apprenticeships now becoming more common than university education. Do the costs taken out by delivering the course cost more than what could be generated by fees? Could be much more flexible and be based around real life projects. Upon qualification people could be much more rounded. Do students like the separation? Could be more PhD style teaching – research based with clients. Will Firm A train other architects as a training institute?

the direction of existing business, strategy, possible innovation and changes, and critical success factors for improvement. Based on these factors, participants were tasked to pose Opportunity Questions (OppQs) to provide focus for their search for ideas for innovation that were considered relevant and important for the firm. We agreed that part of the focus was the year 2031 and that working in sub-groups of 3, they should aim for at least 10 OppQs which they could share with others in the whole group and others in Firm A.

At the first review meeting, participants were able to share their OppQs with the whole group. Between them, more than 30 OppQs were presented. Examples of the questions are shown in [Table 2](#).

Sourced from the three sub-groups, the OppQs showed a certain degree of overlap and connection but also some interesting difference. The most common set of questions related to what can be seen as new income streams. Several questions concerned the movement towards the digital presence of Firm A in the future but also the need to recruit and retain key members of staff, recognising that Firm A seemed be slow in adapting. A particular line of questions referred to a more strategic view of marketing and the skills of staff to work with digital content, TV appearances and online influencers. The action for participants was now to work with their OppQs and, working in their sub-groups, use the questions to stimulate their talk and provide potential and possible responses. This process would allow the beginning of seeing ideas (Oppls) that were feasible and desirable for further development. Some examples of the outcomes of this process are shown in [Table 3](#).

This process of using OppQs to stimulate thinking to allow the emergence of Oppls provided the beginning of the accumulation of a list of potential innovation possibilities. To continue on this path, the movement into the 4th and 5th meetings began with surfacing of assumptions about the future relating to technology, markets, customers/clients and global conditions. These could then be set against Firm A's current areas of activity – architecture, interior design and building consultancy – to form a future opportunity matrix, based on the ideas of Micic (2010). The matrix, composed of a range of different cells setting assumptions against areas of activity, allowed consideration of:

1. What are the opportunities if the assumption comes about?
2. What are the opportunities of the counter-assumption?
3. What are the opportunities if things happen in a different way?

The outcomes of this process for Clients are shown in [Figure 2](#).

The importance of this particular matrix is how it produced an innovation that was accepted quickly by Firm A's leadership team. This was a shift in strategy to take a proactive approach towards sustainability by the commitment of resources to employ a Sustainability Manager for the firm. The completion of further matrices produced a list of ideas for innovation that could be presented to leaders. The list contained ten ideas and alongside each a short assessment of assumptions and the potential opportunities was provided. From the list, two were discounted and the remaining ones approved to explore further. Since there were insufficient resources to progress all the options, it was decided that the leadership team would vote, with the top two selected for progress now and the others considered later.

Clients and Needs	Architecture	Interior Design	Building Consultancy
clients will want things cheaper and quicker	<ul style="list-style-type: none"> <li>- exposure to more projects and client opportunities</li> <li>- invest in new software and hardware</li> <li>- clients realising and appreciating quality</li> <li>- alternative procurement route (traditional procurement and contract becoming popular again)</li> <li>- increase in wages due to services appreciated and specialisms emerging</li> </ul>		
clients will request a more sustainable approach	<ul style="list-style-type: none"> <li>- low carbon design service (Passivhaus)</li> <li>- Build up skillsets</li> <li>- advertise the solutions and services Firm A can offer</li> <li>- the counter can't exist (due to mandates)</li> </ul>	<ul style="list-style-type: none"> <li>- specialising in procuring zero carbon projects (vegan materials etc)</li> </ul>	<ul style="list-style-type: none"> <li>- new sustainability services (in house)</li> </ul>
clients will require traceable procurement – to reflect their corporate image	<ul style="list-style-type: none"> <li>- to share values with similar clients</li> <li>- up skill in material selection</li> <li>- use local procurement routes</li> <li>- boost social value status</li> <li>- build relationships with local suppliers</li> <li>- lose nationwide business because of localism</li> <li>- setup vast network of smaller offices nationwide</li> </ul>		

Figure 2. Future opportunity matrix.

<b>OppQs</b>	<b>OppIs</b>
Is South Africa/Africa's national banking infrastructure capable of facilitating biometric payments on a large scale?	<b>At the moment we do not think so to the needed extent. Perhaps we could be pioneers of the infrastructure to facilitate this.</b>
How will our system interact with alternative payment types such as cryptocurrency and mobile money?	<b>VAS Gateway type transaction where the integration is with the provider directly for additional tender type, for example Luno for Crypto.</b>
Would expansion include the UK and other countries outside of Africa?	<b>Yes it would include the UK and we would remain open to opportunities regardless of geographic location.</b>
Which infrastructure will be best suited for opportunities outside of South Africa? (in-country/cloud)	<b>Cloud would be the best option as it would reduce expenses and maintenance, keeping up with standards and not becoming redundant.</b>
What are our competitors currently doing in international markets and how are they doing it?	<b>We are aware of a competitor switching outside of SA, as well as providing loyalty with in-country resources. The rest of our competitors would need to be analyzed.</b>
Will the current resource compliment of Nomad be sufficient for rapid expansion?	<b>Currently in some areas we have sufficient resources. In other areas we may fall short and require more to bolster the expansion such as field, implementations and development.</b>

**Figure 3.** OppQs and is for Firm B.

The options of Creative and Surveys were selected and a small group were identified to prepare business plans using Firm A's template. Each group would then present back to the leadership team for approval and then implementation.

**Firm B**

Firm B is a medium sized SME based in South Africa providing an integrated and stand-alone digital payment and card-processing system for retailers. The core business activities were considered as Transaction Processing, Customer Needs Fulfilment and Relationship Building. All meetings took place in 2022 using virtual mediation with participants logging on from different parts of South Africa and two in the UK. There were 9 participants, including the CEO, who were divided into 3 sub groups.

By December 2023: We have implemented integrated cryptocurrency

Goals:

Crypto provider/s engaged with to kick off the project and agreements have been concluded. Integration has been successfully completed into our platform. We have at least one merchant actively using/piloting the solution.

Activities In place by:

By February 2023 we must a willing provider to engage with us further.	By April 2023 the agreement should be signed with said provider.	By May 2023 project planning should be finalized.	By June 2023 integration project should begin.	By October 2023 our pilot merchant should be chosen and engaged with.	By December 2023 we should implement at the pilot merchant.
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**Figure 4.** Implementation plan for integrated cryptocurrency for Firm B.

As with Firm A, we began the FFL process with a consideration of key patterns and trends affecting the business followed by setting OppQs for 2032 and then responding to find initial Oppls. An example is shown as [Figure 3](#).

The participants in Firm B continued the FFL process by considering their assumptions for the future and completion of future opportunity matrices, from which they considered a range of innovations. By the final meeting the following were presented as desirable and feasible innovations:

1. Implementation of integrated cryptocurrency
2. Bring our switching software in-house as opposed to relying on a third-party provider
3. Deployment of Self services donation devices countrywide

A plan for each of these was developed for presentation the group. The plan for the first innovation is shown as [Figure 4](#).

### *Firm C*

Firm C is a 5th generation engineering company based in West Yorkshire that designs and produces a range of goods and services related to high pressure safety systems. Much of its turnover is derived from export sales in a diverse range of sectors including aerospace, defence, oil and gas, and funerals. There are around 80 staff organised into 4 departments. Importantly, over the last 20 years, Firm C has progressively sought to devote attention and resources to innovation and new product development. This has involved acquisition to allow access to new markets and the employment of staff with advanced knowledge and skills, up to a PhD.

The FFL group consisted of 9 participants, 2 from each department plus the group finance manager. Meetings were held in person during 2022 once COVID restrictions allowed. However, during the first sessions, Firm C was faced with disruption from the war in Ukraine and the effects of rising energy prices. Firm C was heavily reliant on gas and electricity supplies and while it had fixed prices under its current contract, it was forecast that these could more than triple when the contract ended. These issues became more prominent during the FFL process. The focus here is on one of the departments, Firm C Production which was the manufacturing part of the business. After consideration of trends and patterns, examples of the OppQs included:

1. Is our growth organic, acquisition or a combination?
2. Will we have our own design team, with our own products?
3. Have we entered the Hydrogen storage markets?
4. Have we achieved the full potential of a Digital ERP system?
5. Are we still on the same site, with the same original buildings?

In responding to these questions, to consider Oppls, two particular foci became prominent:

- a. Hydrogen storage capacity
- b. Own design team

	Market needs	Products	People	Processes
Our own Design team will be developed and established- to cover new markets as well as traditional ones	<ol style="list-style-type: none"> <li>1. Most competitors in our sector have an in house design facility.</li> <li>2. It is more difficult to compete and grow the business, without an in house design facility.</li> <li>3. Having a design facility will enable us to enter new and emerging markets such as Hydrogen storage.</li> <li>4. Over time, Firm C Prodn have the opportunity to design and take their own products to market.</li> <li>5. In house design will lock us in to contracts at a much earlier stage and make it less likely for customers to outsource the manufacturing.</li> </ol>	<ol style="list-style-type: none"> <li>1. Design should be focused on our core skill set: Pressure vessels, Decompression, MOD.</li> <li>2. Hydrogen storage and carbon sequestration are key opportunities for the future.</li> </ol>	<ol style="list-style-type: none"> <li>1. Design facility will promote creativity.</li> <li>2. We can leverage our depth of knowledge and strong relationships.</li> <li>3. Knowledge partnerships with the local universities will be a key factor in our success in emerging markets and technologies.</li> </ol>	<ol style="list-style-type: none"> <li>1. Production errors can be reduced and turnaround times significantly improved, if we had our own design facility.</li> <li>2. Being accredited for FFH2 will be the first step in entering the Hydrogen.</li> <li>3. We will adopt standard design processes and IT facilities across the Group.</li> </ol>

**Figure 5.** Future opportunity matrix.

The design team was significant since it related to a historical separation in Firm C of manufacturing and design into two departments. However, there were new possibilities for design that were considered as part the FFL process within a Future Opportunity Matrix, a feature of which is shown as [Figure 5](#):

The matrix considered the innovation for the development of a design team as well as the hydrogen storage capacity. These were then taken forward into a business plan which set two goals for 2026:

Firm C Production to have entered the hydrogen and carbon storage markets and working towards having their own products to market.

The achievement of these innovations would require the recruitment of a design engineer with specialist hydrogen and carbon storage experience and a sales engineer with hydrogen/carbon storage background.

Other groups in Firm C also developed their ideas for innovation through the FFL process:

1. Standard designs for 60% of products
2. Alternative products for a domestic market involving agricultural animal disposal
3. Product development to ensure market leadership

Each of these was used to develop a strategy leading to the identification of success indicators and goals, and key activities to guide the identification of business plans and resource requirements.

## Discussion

In the UK, according to the Office of National Statistics<sup>2</sup> in October 2022, SMEs accounted for 99.9% of business, most of which, 5.47 million, had 0 to 49 employees (99.2% of the

total). There were 35,900 medium-sized businesses with 50 to 249 employees. In the UK, there are difficulties facing organisations with respect to business investment and innovation, where figures, again from the Office of National Statistics<sup>3</sup> suggest that business investment in 2022 remained below the period before the COVID pandemic. Given the size and numbers of SMEs in the UK, this would suggest that SMEs become a crucial source of innovation and investment. What has been impressive is the number of ideas for innovation that have been produced through the FFL process reported in this paper. Further, even though Firm B was located in South Africa, the ideas produced and then selected for adoption for implementation in Firms A and C added to the UK's investment in innovation, involving business planning and resource allocation. This process could be replicated in many SMEs in many sectors.

Of course, many SMEs, especially the smaller single ownership business, might not have a need for innovation and others might not have an innovation orientation. Most will continue with an informal approach based on incremental adjustments. However, if ambition and capability are present, there can be a move towards ambidexterity (Colclough, Moen, and Hovd 2019) based on exploitation of existing processes, products and services and exploration to find new opportunities. The FFL process based on the cycles of scanning, futuring and reconfiguration allows all participants to enhance their knowledge, understanding and critical thinking skills. In scanning, participants became aware of and receptive to information from different sources. For many, it was the first time since completing formal education they became aware of and made use of various databases and web browsers such as Scholar Google. Scanning also opened a creative process of talking and thinking that led to the development of opportunity questions (OppQs) which not only served to gain access to new information but also to ease the path into futuring where ideas for innovation began to emerge. Of course, an action learning process, here combined with FFL, relies on new questions to stimulate and catalyse thinking for innovation (Kuhn and Marsick 2005). Further, through the process, ideas accumulated before being considered more carefully allowed participants to experience and recognise the importance of divergent and convergent thinking and talking in a creative process (Goldschmidt 2016).

The action learning research (ALR) approach employed in these projects allowed feedback from the learners throughout the process and this included access to the findings they produced. In addition, feedback from the owners, managers and directors of the SMEs point to how FFL provided an opportunity for their organisations to become more strategic, future-oriented and creative. In Firm A, a professional services business, the managing partner pointed to how 'future thinking' allowed the firm to 'have a much wider perspective on our operations and help us make better decisions'. In particular, by making moves toward ideas that emerged from the process, the firm was 'given confidence to make decisions that may have previously held us back'. In Firm B, the owner was involved in the process and saw how his team was able to 'open our peripheral vision and be transported to a future position'. In Firm C, the FFL developed capabilities that allowed 'anticipating the future' which meant considering 'what ... we need to start doing now to make it happen' or 'prevent' difficulties that were surfaced. The ideas that were developed could support 'the long term vision' and were essential for 'the success of the organisation'. The involvement and interest of owners, managers and directors in the FFL programmes helped to counter any resistance that might arise in relation to ideas for innovation and satisfy fears regarding financial control (Dovey and Rembach 2015).



The creativity of the FFL process which resulted in ideas for innovation that could be grounded through a justified business plan meant that capabilities were developed for making strategy. Ideas for the long term future could be deduced for action in the near future through strategic thinking thus enable each SME to enhance its human capital (AlQershi 2021). Further, the surfacing of assumptions, including the chance to articulate contrasting possibilities provided space for challenge, dispute and alternative considerations that could be reconciled in a reconfiguration of what could be offered, allowing the SME to gain confidence in how it competed (Zahra and Nambisan 2011).

An important feature of the delivery of the programmes is the reconfiguration of futures and foresight as a learning process and representation as FFL. This was done to overcome some of the limitations that were featured in Hines and Gold (2015) such as delivery as workshops which often resulted in less penetration into strategy. As Gold et al. (2022) point out, this allows FFL to be considered as an aspect of Human Resource Development (HRD). It is further suggested that this could also enhance the status of HRD practitioners and allow their efforts to be considered as significant for strategy. To supplement this move, and as evidenced in this paper in Figure 1, the key phases of scanning, futuring and reconfiguration as presented by Fernani et al. (2020), can be presented as a learning cycle so that different purposes of FFL can be adopted over a longer period of delivery. Further, each phase itself is a cycle so that there is chance for participants to iterate and reinforce key skills such as horizon scanning or the practice of future methods. FFL also lends itself to delivery through action learning either as face-to-face presences or through virtual mediation across time zones and national boundaries. While this presents a challenge to traditional formulations of action learning based on Revans (1983) and others based on real problems faced by learners. However, the FFL process in 2023 always begins with the posing of questions that reflect the interest of participants in the context of the organisations they work in. Further, again resonating with the action learning tradition, questions are posed that learners do not yet know how to address because the questions are concerned with a future that has not yet happened. However, the questions open new possibilities and, if the purpose is set for new opportunities for innovation, the outcomes can be linked to strategy and then action. This must open exciting possibilities for those who work with action learning, adding FFL to the possibilities identified by Pedler and Brook (2017).

## Conclusion

This paper began with an aim to consider whether three SMEs could find opportunities for innovation through FFL. Based on a delivery through action learning, it has been demonstrated that many possibilities emerged in each organisation. Surveys suggest that SMEs are less likely to innovate compared to larger organisations but given the large numbers of SMEs in the UK and elsewhere, it become important that more find a path to innovation. The challenges of the times suggest that uncertainties in the present could provide many difficulties to SMEs. However, if SMEs can look into the future, they can reveal new opportunities that could sustain their organisations in difficult times.



## Notes

1. Surveys of exporters completed for the British Chambers of Commerce showed that from 1000 responses, mainly from SMEs in 2022, 71% did not feel the post-Brexit trade deal with Europe was enabling them to grow or increase sales. Go to <https://theloadstar.com/survey-of-uk-exporters-finds-71-suffer-in-post-brexit-eu-trade-deal/>.
2. Figures available from [https://www.gov.uk/government/statistics/business-population-estimates-2022/business-population-estimates-for-the-uk-and-regions-2022-statistical-release-html#:~:text= SMEs%20\(small%20and%20medium%2D sized,4.1%20million%20had%20no%20employees.](https://www.gov.uk/government/statistics/business-population-estimates-2022/business-population-estimates-for-the-uk-and-regions-2022-statistical-release-html#:~:text= SMEs%20(small%20and%20medium%2D sized,4.1%20million%20had%20no%20employees.)
3. Figures available from <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/businessinvestment/julytoseptember2022revisedresults>.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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