Robotics & Artificial Intelligence
Special Interest Group

Bridging the Risk Gap between Small and Large Companies
Thought Leadership Paper

Innovate UK
Knowledge Transfer Network

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Introduction

New technology is most often rapidly propagated by small companies that do not typically own the market. In contrast large companies have a deep and detailed understanding of their markets but often fail to innovate, or have limited ability to do so. Small technology oriented companies need to access markets in order to grow. Large market stakeholders must seek new technology to remain ahead of their competitors.

The mutual benefits of collaboration are clear but connecting small agile technology companies to large market owners often comes with a “Risk Gap”. A gap between the risk presented by a small technology company and the risk a large company is prepared to take. This risk is multi-faceted relating to technology, reputation, value and finance.¹

The gap is caused because each side has different goals and objectives, different cultural approaches and different concepts of risk. However, closing this gap may simply be a matter of educating each side about the other, so that the chances of a successful collaboration are increased.

Potentially successful collaborations often fail at an early stage because of misunderstanding and a failure to develop trust, these failures often occur around the initial meetings between the potential collaborators.

¹ This is often represented as a “valley of death” but describing it as such does not help provide a solution nor does it explain the causes of the gap, there is no bridge to span the valley instead it is the two sides that must come together.
Sources of Misunderstanding

Large companies need to seek external sources of innovation, even highly innovative ones need to keep ahead of the market by scouting for new technology. Despite this need many market stakeholders do not have innovation built into their structure, do not understand collaboration or how to interact and invest in small companies. Even where there is prior experience each interaction will be different and valuable opportunities may be missed because each side fails to adapt to new circumstances.

The sources of misunderstanding between small and large companies can be found across all areas of interaction. The very things that make each organisation successful in their own endeavours are often exactly the things that create misalignment. For example the lack of structure in a small company makes it difficult for a large company to work out where to connect its business services; contracts, accounting, procurement; most probably separate departments in a large organisation but possibly resting with one individual in a small company. But it is the synergy and agility made possible by combining the functions that gives the small company its advantage.

The “short pitch” mentality of a small company may seem arrogant to a large company and while a small company may be capable of great flexibility, for example in the way that it accepts investment, a large company may find it hard to step outside of a procurement based approach. Sometimes there are simply personality clashes and preordained misunderstandings that require courage and effort on both sides to overcome.

This lack of mutual understanding can create a failure to realise where the opportunity lies and cause collaborations to fail before they start. This paper encourages an aligned approach from each side that can lead to a higher chance of success.
**Small from the perspective of large**

From the perspective of a large company, small companies can seem difficult to judge. There is often little or no trading history and the terminology they use may not match with corporate usage. The people working in them may lack business experience and their roles are not always clear. Establishing the capability of their offering may be difficult and there is a perceived risk of hidden IP or technical issues that neither side can foresee.

**Large from the perspective of small**

Large companies exhibit institutional behaviour, they have embedded cultures and always act in their own interest. To a small company this may come across as secretive and unhelpful. Large companies will have strategy and direction, they will have projects on-going that they cannot discuss and, as a consequence, they may see opportunities with your offering but not be able to discuss them.

From the perspective of a small innovative company a large company may lack the skill base, or innovative culture needed to develop and integrate new technology, surprising as it may seem they may well be successfully delivering products and services without the underlying capability to innovate. This can make engagement more difficult as they may not understand the process of innovation or even use the term “innovation” in the same way.

It is always important to remember that large companies survive because they have a detailed understanding of their market and the problems it presents.
Small Company Risks

SMEs who develop novel technology face increasing levels of risk the closer they get to market. This risk accumulates over time. Illustrating the risk profile helps to show why SMEs need to engage with markets from an early stage in their development. Although the actual levels of risk will vary company to company and application to application engaging with a large potential customer allows the size of the risk gap can be assessed. This is valuable information that will help guide and shape decision making.

The risk gap does not consist of one parameter but is composed of many factors. In addition different collaborative partners will perceive different overall levels of risk. Partly because their appetite for risk may be different but also because their ability to mitigate the risks they see will also be different.

Figure 1 shows that the peak risk occurs prior to the point where a technology can be proved in the market. Any steps that soften out this risk peak will create greater success. Focusing at an early stage on a specific market, where there is identifiable business potential, provides a good opportunity to build trust with stakeholders, align to standards, and access testing assets. All this will help reduce risk and create focused development.

If a small company reaches this stage of innovation without a clear market opportunity to drive the acquisition of finance, either through collaboration or from external investors, then it is likely to fail in the market.

Figure 1: Risk and investment profiles for an SME.
Large Company Risk

The risks for the large company are different; the immediate existential risk of the small company is replaced by a longer-term existential risk of losing market share. A large company may lose market by both failing to innovate and by innovating too fast and bringing out products that fail to deliver value for money to customers.

The financial-technical risk of innovation lies with the large company since it will have to invest to bring a new technology to market. This makes it cautious when considering what it seeks to use.

Large companies also face commercial risks in exposing their search for new technology or revealing their “pain points”. So they may be reluctant to explain what they are looking for. Since their competitors will certainly be seeking the same answers there is always the risk that any small company they collaborate with will be bought up by a competitor or, even worse, be negotiating with a competitor behind their back. This completely rational and risk averse viewpoint can make a large company look secretive and non-committal.

It is also worth noting that a large company, if it is innovative and the technology provided by the small company is of value, may look to purchase equity in a small company in order to ensure competitors cannot buy it out. Correspondingly any financial instability in the small company may provide leverage for the large company and an acquisition opportunity for both staff and IP.

![Figure 2: Typical large company view of risk vs value.](image)
Large Company Preparation

This is a checklist of things any large company should consider when exploring small company collaborations. They represent the combined experience of both small and large companies that have successfully collaborated:

☑️ Work to understand them

What type of SME are you about to meet, who are you meeting and what area are they engaged in? Working out who they are in advance of a meeting will help shape the first meeting and may result in a more successful collaboration earlier. Recognise that they will also need to understand who they are meeting and make sure there is a like for like match between the people and skills on both sides of the table.

*Just because a small company only has five employees does not mean you can’t work with them but it will require more effort up-front to avoid misunderstandings.*

☑️ Explain your process

Providing a process chart that shows how decisions are made around R&D or procurement and explaining the different ways your company will and won’t engage can help the small company understand how it should engage, who it should send to each meeting and what they need to be doing to align with your processes.

Many mis-matches in expectation are caused because the SME mis-pitches. They need to understand who they are talking to and what role they play in the procurement process.

*At the end both sides want a business transaction that is a win-win, so make sure you keep that in focus.*
Consider early exploratory collaboration

Identify a small low cost collaborative experiment with low expectation to help build trust and assess the readiness of their technology, possibly constructed to remove the need to reveal where you think their technology fits your problem space and, very importantly, without the small company losing or fearing the loss of IP.

For example once you are over the first meeting consider how you can create an early engagement at low cost, a £10-20k feasibility study, or an on-site demonstration where you pay set-up costs, this can help to develop mutual trust and build a relationship. It can be more effective than multiple meetings which will cost the same on both sides in time and effort. But make sure you strip away the corporate bureaucracy so that they are not asked to make giant leaps through your hoops to get to that first point of collaboration, once you’ve built trust you can help them through that as your collaboration progresses.

In this early collaboration make sure that they can retain IP and that they are fairly compensated for the work they do to meet your objectives.

Lower the access barriers

Consider appointing a dedicated facilitator, a person whose role is to help small companies find their way through your structure. Each collaboration will be different, each will hit different problems. Since you can’t change your processes invest in helping them through procurement and supply. Small companies need access to a single person who knows how to navigate your organisation. Your staff may not always be available or able to help, but in an SME one person may be both technologist, business strategist and financial controller and they will get overloaded having to deal with multiple departments and different people which is your norm but not theirs.

Above all be clear about what you expect them to achieve and be prepared to meet in the middle. Develop flexible resources for engagement don’t treat them like suppliers where price and delivery are the only parameters, they need a different approach.
Small Company Preparation

These are things that any small company should consider before a meeting with a large company who is a potential collaborator. They represent the combined experience of both small and large companies that have successfully collaborated:

✅ Learn what you can before you meet

Look at their website and company documents to understand their market and how they operate, try to understand their business model and their corporate structure and culture. Seek to understand who makes the decisions on funding projects and what the process is. See if they have worked with SMEs before and, importantly, do they have an SME facilitator?

If you understand their business model then you might understand how to phrase the value your technology or service can deliver and how it might fit their business.

If you understand their corporate structure it might help you to understand who and what level you might be talking at; are you interacting with their R&D people, or with procurement? Will you talk about costs on a first meeting or technology? This type of information will help you structure and pitch accurately at the first meeting.

✅ Align with their culture

When visiting their premises understand and fit in with their culture, this helps give a good impression early. Suits and ties can be good if they help you appear efficient and business like and bad if they make you look old fashioned and out of place. If they have a strong safety culture make sure you understand how that impacts on the way you park your car (reverse in), or carry a coffee cup (don’t), small things can make a big impression.

✅ Know where you are in their process

This helps you shape the meeting, knowing that there is just one chance and you have to pitch everything in the first 15 minutes or that there are three stages and the first is just to size you up and see if you can talk sense. Knowing this will have a big impact on how you approach the first meeting.

Understanding who you are talking to is essential. You need to shape your pitch against their expectation, pre-meeting groundwork is essential in making the right approach. Some large companies have a person who’s job is to make sure that engagements with small companies go smoothly, if they have someone like that find them as quickly as possible!
One important piece of advice on your approach is this:

✔️ **Remember that they own the problem**

Remember that the large market stakeholder understands their problem far far better than you do. Their whole business is based on understanding their problem space better than their competitors. So don’t, under any circumstances, go into a meeting and use the phrase “I can solve your problem…” You can’t. You may not even be told what problem needs solving, or what role they see for your offering. Your goal is to show that you have something real to offer, that you know what you are talking about and that you have a clear approach to collaboration, that also means you have red lines you won’t cross.

✔️ **Explain what stage your development is at**

They will want to understand your technology or service, will want to know something about how it works so that they can see where it fits, even though they may not be able to communicate it. They will want to know costs and performance criteria, they will want honesty about the stage you are at so that they can assess the readiness level in their terms rather than yours.

There is no point in hiding where you are, honesty is important, it builds trust. It is better that you walk away from a first meeting with your integrity attached having built trust and the opportunity to return. The worst case scenario is that you create a false expectation that crashes out at a later stage. In reality investment from a large company will not solve underlying issues, it may simply bring them into focus more sharply. By communicating them it is possible that a better relationship can be developed.

*Large companies are not altruistic: They will always operate in their own interest, your goal is to find the win-win scenario. They may have many different motives for engaging with you and these will not always be stated.*
Trust

Both sides have to work out how they deliver trust into the interaction.

Each side will have an agenda, for a large company this may not be visible or communicable, which can create an up-front barrier to trust, or at least the perception of a barrier. It is therefore important to be open about what can and cannot be communicated. For the small company there may be issues around IP, other collaborations or around the stage of Robotics & Artificial Intelligence Special Interest Group development that you feel cannot be communicated without affecting the impression you wish to give. Trust requires openness but also creates it.

*It may be helpful to realistically assess the level or direction of trust at each meeting. Think clearly about how each encounter raised or lowered trust and consider how the next meeting can be used to increase it. Even if it does not go as intended, on either side, understanding that each meeting is an opportunity will help drive communication and planning.*

*Figure 3: Building trust from meeting to meeting.*
Collaboration Gain

Reducing risk to the large company centres on building trust, trust in people, in technology and in relationships. This requires effort on both sides of the collaboration.

All of the above factors and differences can get in the way of a successful collaboration, they very often impact within the first few meetings where attitudes are formed and early trust is developed.

In the end what matters is that collaboration results in a win for both sides. The importance of first meetings and impressions cannot be over emphasised. There is a process to collaboration and this Thought Leadership Paper is designed to deliver hints and tips on successful collaboration that are equally valuable to the small company as to the large one.
## Acknowledgements

KTN wishes to thank the following contributors to this thought leadership paper:

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