

Enhancing interaction

Nigel Oseland reveals the results of a two-year research project on how to create successful spaces to promote interaction and innovation.

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In the current downturn, the tactic for most businesses is to reduce their cost base, ie people and property, to allow them to undercut their competitors and simply survive. The alternative strategy is to look forward, prepare for recovery and use the available time to review the business, develop improved services and products, and line up the best people ready to deliver them. It is often said that recession leads to innovation, but in the global market innovation is fundamental to gaining a competitive edge regardless of the economic climate. Innovation is borne out of creativity and collaboration, with good face-to-face interaction being the starting point.

The western world has undergone three key stages of industrial evolution represented by three economic sectors: mining and agriculture (primary), manufacturing (secondary) and the service industry (tertiary). The balance of workers in each sector has shifted as we have developed new products and services and "offshored" the old ones. About 70% of us now work in the service industry and are referred to as knowledge workers.

Due to the internet, knowledge is ubiquitous and therefore the service industry is vulnerable to copycatting and undercutting. In response, there is an emerging creative and innovative (quaternary) economy: "The knowledge economy as we know it is being eclipsed by something new – call it the creativity economy ... the game is changing, it isn't just about math and science anymore, it's about creativity, imagination, and, above all, innovation" (*Business Week*, 2005). In essence, for UK businesses to survive long term it is essential that we are innovative and capitalise on our ideas and creativity.

Many terms are used to discuss interaction and innovation, and the diagram opposite is an attempt to give these terms some structure. The cycle illustrates how through interaction and collaboration some basic information can be used to generate new knowledge and ideas collectively, which can be converted to a new product or service. More social interaction and stronger relationships enhance knowledge transfer and accelerate the steps in the interaction-innovation cycle.

The cycle also recognises that innovation involves bouts of solitary work and social interaction. Research shows that each time we are interrupted when focusing on a task it can take up to 15 minutes to recover our "state of flow". It is therefore important to provide the right balance of spaces for interaction and for concentration.

The focus here is on face-to-face interaction rather than virtual interaction. The benefits of virtual interaction

are acknowledged, particularly in a world where we aim to reduce travel and the associated carbon. However, virtual interfaces do not convey well the "spatiality" of human interaction, including context, pointing, gesticulation, judging reactions and non-verbal communication such as body language, posture and facial expression. So, virtual interaction is useful but no replacement for face-to-face interaction, particularly the first meeting of individuals or teams. Furthermore, the increase in remote working means that face-to-face interaction is important for motivation, team-building, mentoring, a sense of belonging and loyalty.

CONDITIONS FOR INTERACTION

AMA Alexi Marmot Associates recently completed a two-year applied research project on how to promote and enhance interaction in the workplace. The research was part funded by what is now the Department for Business, Innovation and Skills, with assistance from University College London. A literature review was conducted and used to inform the development of new methods for investigating interaction, termed *WorkWare^{CONNECT}*, which were piloted in the offices of five diverse organisations. AMA surveyed eight buildings and observed 350 meeting spaces and approximately 3,500 meetings with 12,700 participants. The data collated supplemented AMA's existing database of 60,000 people in 250 buildings. The review revealed that there are several key parameters for creating successful spaces for interaction:

- *proximity* – the frequency of all forms of communication decreases with distance;
- *accessibility* – easy access and the known availability of spaces for interaction is important;
- *privacy* – a sense of perceived visual and aural privacy is important, which could be achieved through semi-enclosure or a remote location;
- *legitimacy* – a valid reason is needed for being in the space where interactions may take place; and
- *functionality* – the layout and style of the furniture, the equipment and services provided, the environmental conditions and the capacity all affect the suitability of the space.

One of AMA's new methods, the Quality of Interaction Zone (QuIZ), is a checklist used during an expert walkthrough to quantify the above conditions for successful interactions. The research found that there was a significant correlation between observed space use and the quality of space. We were able to measure this relationship, which means that uptake of the space for interaction, and the implied success of that interaction, can be predicted according to the quality of the space.

Further analysis revealed that two primary factors are accessibility and privacy. So while the spaces need to be

conveniently located, such as near primary circulation routes, they also need to offer a level of privacy. The research repeatedly found under-used informal meeting areas that were simply a cluster of furniture placed on a circulation route in clear view of passing colleagues. More successful interaction spaces offered a balance between being conveniently located and offering a degree of screening. Interviews with occupants also revealed that they do not like to go far to interaction areas and are likely to stay local unless the spaces entice them, for example by offering nice refreshments and ambience.

Another factor measured in the *QuIZ* was the provision of technology and equipment. Unexpectedly, only 20% of the interactions in meeting rooms used any form of technology. It is not clear if this is because the technology was not required or because it was not available. The research showed that meeting rooms with better facilities, including technology, were the first choice for meeting organisers. However, it was also revealed that technology was not used in meeting rooms because people were uncertain what was available or it was too difficult to set up. Furthermore, in some organisations the interactions taking place in meeting rooms did not require the formality of a meeting room. This "meeting-room culture" is difficult to break and requires provision of a range of different spaces for interaction and training in how and when to use them.

The higher the ratio of all meeting spaces (not just rooms) to desks, the more meetings were observed to be taking place. This sounds an obvious result but is one that is often overlooked – to encourage interaction one must provide the appropriate number and variety of spaces for interaction to take place. In contrast, the research also revealed that meeting-room utilisation was only 37% and use of informal meeting spaces was even lower at 21%. So although the number of meetings is related to the number of spaces provided, these spaces are nevertheless under-used, due to factors such as the quality of the space, perceived privacy and advertised availability.

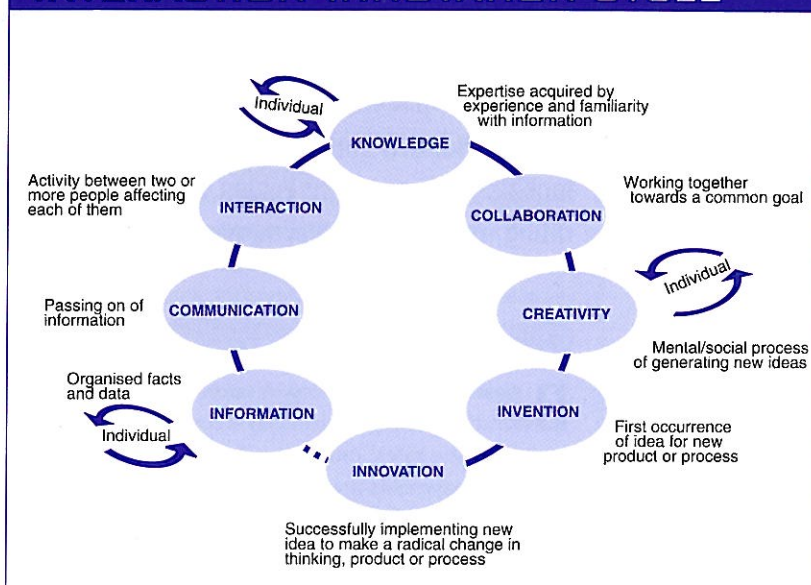
As a consequence of the findings, AMA has developed a Meeting Room Calculator, which uses utilisation and the expected frequency and size of formal and informal meetings to determine the number of meeting rooms required to support an organisation.

REASONS FOR INTERACTION

As well as existing design guidance on how to size and lay out a meeting room, there is a whole set of guidance on how to arrange and manage successful meetings. There appears to be little overlap between these two sets of guidance. There are five key reasons cited for interaction and the type of space should be selected to facilitate the specific reason for interaction:

- *sharing information* – the creator of new and complex information will need to explain it either in a local meeting room, with good projection facilities, or by webinar if the recipients are geographically distributed;
- *making decisions* – although some decisions involve many stakeholders, in general they are made more

INTERACTION-INNOVATION CYCLE



quickly within smaller groups; so consider locations which minimise interruption and keep the group focused, for example a discrete meeting room or off-site conference room;

- *generating ideas* – the flow of ideas can benefit from an informal setting; consider stimulating spaces with good equipment for capturing ideas and breaking out into smaller groups;
- *resolving (personal) problems* – the private office, especially if on view, is not always the best place to resolve personal problems; consider a quiet café or restaurant not overlooked by colleagues; and
- *socialising* – spaces offering food and drink and recreating the "watering hole" are best.

AMA's research found that although space matters, it cannot, on its own, overcome organisational issues. For example, the success of formal meetings was found to be largely due to good meeting etiquette, such as having an effective chairperson to ensure the meeting runs on time and follows the agenda. The occupants surveyed also complained of too many meetings, particularly regular repeat meetings to which they have little input but feel obliged to attend.

FACILITATING INNOVATION

Innovation is vital to business survival and interaction is a fundamental step towards innovation. AMA's research showed that successful interaction depends on both physical and organisational factors. Educating office workers about the purpose of interaction and the different media for interaction is as important as providing the right number of well-designed spaces for interaction. The financial benefits gained through innovation may take time to show themselves, which makes the business case for providing additional space difficult. One solution is to introduce desk sharing and replace under-used desks with good collaboration space.

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NOTE

This article is based on presentations made in October at the Workplace Trends and IFMA World Workplace conferences. The research was carried out by Felicity Swaffer and Sophia Ceneda of AMA and Irene Lopez de Vallejo of UCL.