



Collective Intelligence in Organisations

Executive Summary

London, June 2015

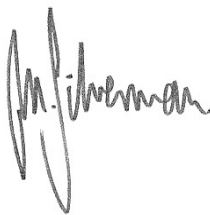
This summary provides an outline of the main report *Collective Intelligence in Organisations: Uses and Challenges*. The report brings together perspectives from different areas of study in what is a very diverse and multi-disciplinary topic. First we look at Collective Intelligence in general terms – what it is, how it is defined, the impact of social and digital technologies and how organisations are using it to address a variety of business issues. Then we discuss the various challenges to overcome in designing and using Collective Intelligence tools in an organisational context.

The report centres on Collective Intelligence systems and tools that involve some form of discussion, ideation or interaction as well as interactive voting or rating mechanisms. This is because tools that possess these functions are reasonably common and also that they are often the most complex in terms of design, administration and analysis.

One issue that emerges quite strongly is that not all Collective Intelligence is created equally – there are levels of Collective Intelligence. Simple survey methodologies do provide Collective Intelligence of a sort, but what they lack is a social element that enables participants to evaluate each other's responses.

This is important because when this type of aggregation is provided it is possible to obtain *Social Collective Intelligence* and that's quite a different proposition in terms of the richness of insight produced. If a group is interacting in a system that has been carefully designed to optimise their input and extract insight then the level of Collective Intelligence obtained can be far greater than any survey.

I hope the report is useful to people working in Market Research, Digital Social Innovation, Computer Science, Internal Communications or Human Resources. Thanks to Milly Picton for help with the report.

A handwritten signature in black ink, appearing to read 'M. Silverman', with a stylized, flowing script.

Michael Silverman
Managing Director
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What is Collective Intelligence?

The Internet is giving rise to some remarkable technologies that enable large groups of people to collaborate online. This is having a huge impact in the field of Collective Intelligence as it provides an opportunity to progress research and practice in this area. There is great need to understand what's important in mass online interactions and discussions because intelligence doesn't just reside within us as individuals – it also emerges from groups of people. Collective Intelligence is a broad area and the term is often applied quite liberally to a variety of activities or systems.

In the last ten years there has been an explosion in both research and interest. The main reason for this burst of enthusiasm is the rapid advance of social and digital technologies in both business and in the public sphere. These changes reflect the rise of a new era for Collective Intelligence, one that is able to fully take advantage of both the increasing interconnectivity between people and also the increasing computing and storage capabilities of advanced information and communication technologies.

The rise of social technologies has facilitated the rise of Collective Intelligence because before this it was almost impossible for large and dispersed groups of people to organise themselves and interact. Today, people can participate within technological systems that are increasingly able to orchestrate the collection and analysis of human social activity. This is the frontier of *Social Collective Intelligence*: networks of people and computers acting together in intelligent ways.

The term *Crowdsourcing* is synonymous with Collective Intelligence and the two are often used interchangeably. Crowdsourcing can be defined in different ways, although it's frequently defined as *taking a task that is typically conducted by one person and outsourcing it to a large group of people*. Both Collective Intelligence and crowdsourcing involve groups acting together online, however, there are differences. Crowdsourcing can enable Collective Intelligence, although that is not always the case. Crowdsourcing is usually more of a process, the goal of which is to distribute workload from one to many. Collective Intelligence, on the other hand, can be better thought of as a goal. The focus is on the output.

Using Collective Intelligence

There are many areas of work and types of task to which Collective Intelligence methods can be applied. An area in which Collective Intelligence methods are commonly used is for generating ideas, discussions and solutions with networks of employees, customers and other external parties. Sometimes, there can be a competitive element or other incentives for participation.

In addition to allowing organisations to gather ideas and feedback from a greater number and diversity of people, Collective Intelligence approaches also help organisations to act on those insights by distributing work to people who are best placed to do it. This not only has the potential to enhance quality, but also to increase efficiency as tasks can be conducted in parallel by many people.

Collective Intelligence can also be used to predict the outcomes of future events. Aggregating diverse perspectives, knowledge and experience of employees and customers can improve the accuracy of predictions.

Challenges for Collective Intelligence

Real-world implementations have taught us a great deal about some of the obstacles and pitfalls that need to be addressed in the development and use of Collective Intelligence tools. The challenges for Collective Intelligence come in a variety of forms, which can be roughly divided into four groups. These are challenges in Design, Social-Cognition, Administration and Leadership.

Researchers who are involved with the study of Human-Computer Interaction (HCI) and Collective Intelligence focus on *how* people and computers can be connected to enhance usability and output. The design choices made regarding the user interface of tools are extremely important. Potential participants will only get involved if the user interface guides them in a straightforward and meaningful way. Similarly, those interested in leveraging Collective Intelligence require a means by which to administrate, analyse and extract insights. Ultimately, Collective Intelligence requires the design of both technical infrastructure and human-human interaction (a socio-technical system).

It seems almost intuitive to us that a group will probably make a better decision than an individual and it's commonly thought that the performance of a group will be equivalent to that of its best members. While these assumptions seem obvious, however, there also needs to be acknowledgement that, under some circumstances, groups can make terrible decisions. Various social pressures and cognitive biases can affect the way people behave in a group, and in certain circumstances this can be disastrous.

There are also administrative and operational hurdles to overcome in Collective Intelligence. Research has made a concerted effort to understand how best to grow and maintain active participation in online communities. Overcoming these challenges is crucial because human input is fundamental to Collective Intelligence – without enough fuel (and the right sort of fuel), the engine cannot run. Collective Intelligence in organisations poses some specific challenges for management and leadership because tapping into Collective Intelligence means taking a more open and transparent approach – and this requires significant cultural change.

Collective Intelligence is nothing new. Successful organisations have been encouraging collaboration and interaction since the first modern organisations were formalised. However, it is *Social Collective Intelligence*, resulting from the rapid development of social and digital technologies, which is both new and exciting in this area. Organisations are only just beginning to appreciate the potential that Collective Intelligence can offer. There are pockets of good practice appearing as organisations start to implement various Collective Intelligence activities. However, these early examples of Social Collective Intelligence are likely to be just the start of the story.

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This report was written by Michael Silverman and Milly Picton at Silverman Research: an award-winning research company that works with some of the world's biggest organisations to harness the collective intelligence of employees, customers and consumers.

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