

Playing seriously with strategy

Imagination and play are vital to scientific discovery, yet they rarely feature when scientists plan new projects. **François Grey** and **Johan Roos** explain how playing with LEGO can help

Physics World columnist Robert P Crease recently wrote that physics “uses imagination and play to disclose new truths about nature”. Yet when was the last time you participated in a meeting to plan new research projects that was imaginative and playful? Such meetings tend to be dreary affairs where one person drones on while others twiddle their thumbs or – more commonly these days – surreptitiously answer e-mails on their laptops.

If it is any consolation, the situation is fairly similar in the world of business. Yet it need not be that way. Everyone knows that great ideas are concocted at the oddest of times and in the most unexpected of places – over a coffee in the cafeteria or a beer in the pub. Anecdotal explanations abound: it may be the freedom of thought associated with a more relaxed atmosphere or the buzz of caffeine or alcohol. Sitting stiffly around a table staring at a stale agenda rarely gets the creative juices flowing.

So what can be done to change this? Back in the 1990s, one of the present authors (JR) was working at the IMD business school in Switzerland, where he found that corporate leaders were increasingly frustrated with the traditional methods that companies use to develop new strategies. It then occurred to him that LEGO – those brightly coloured plastic bricks – could be the answer. After all, children learn when they play, particularly when they use their hands.

JR and a colleague therefore began experimenting with what they called “serious play”. Various companies approached JR, and together they began exploring the concept. Several firms then used serious play to encourage their managers to think strategically, with some considerable success. Inspired by this success, in 2000 JR founded the Imagination Lab Foundation – a not-for-profit body based in Lausanne – with initial support from the LEGO Corporation. It investigates how organizations can develop new ways of discussing strategy through new communication tools.

Serious play in action

In a typical serious-play session, participants start with a few warm-up exercises to learn how to stimulate different types of imagination. They do this using LEGO to create physical metaphors of the real world. This process results in 3D constructions, made from LEGO, of how individuals perceive their organization, and, ultimately, of how to deal with a particular strategic challenge.



Many hands make light work – playing seriously with LEGO can help research managers to devise new strategies for their organizations.

What the structure actually looks like is less important. The key point is that the structure provides a “mental scaffold” around which its creator can build a unique description of the problem at hand.

The act of building and describing these metaphors sheds light on what other people around the table are thinking, in ways that simple verbal communication often misses. The process of construction – which inevitably includes an element of competition – also inspires each individual to come up with new ideas. Colourful bricks and figures take on new, amusing and often very insightful associations. Participants are sometimes taken aback by how a familiar issue is seen in a new light, or how new ideas are literally handcrafted by participants.

Lessons from LEGO

The use of LEGO in meetings may, at first glance, look like yet another management fad. Yet feedback from a wide range of participants indicates that the exercise is more relevant to the typical scientific researcher than other strategic tools favoured by management experts. First, this is because the serious-play process involves building real physical structures – a process that experimental scientists, in particular, are immediately drawn to. Second, the sessions that we have run with scientists really have led to some profound “aha” situations. This was particularly the case with multidisciplinary groups that could not understand each others technical jargon or even each others motivations.

We and our colleagues have so far tested the serious-play process in a handful of scientific-research settings. While we have nowhere near enough data for a statistical study, we can begin to draw some conclu-

sions from our anecdotal evidence.

An early effort by us, in 2001, brought together scientists from the US and Europe working in nanotechnology, virtual reality and Grid technology. The participants wanted to investigate various possibilities for a research project that spanned these fields; the problem was they had only a limited knowledge of each other's fields. The serious-play process helped the scientists clear up a number of important issues from the start. In particular, they were able to discuss technical issues more effectively than if everyone simply delivered a PowerPoint presentation in turn.

The participants also gained a deeper insight into the different agendas of the other people around the table. Some of the participants, it transpired, were motivated by developing new research tools, others by the potential of industrial spin-offs, and still others by the educational potential of the proposed project. Revealing these differences through serious play had a positive impact on the ability of the whole group to develop a common strategy that satisfied all interests.

In a follow-up meeting a few months later (without any serious play), the most promising ideas stimulated by the first meeting were discussed further and prioritized. Many of the shared constructions remained fresh in the participants' mind. Indeed, phrases such as “remember the big red brick” became a code for those involved in the discussion, summarizing particular strategic challenges the participants had foreseen. (The red brick in question was the challenge of funding a multilateral transatlantic collaboration.)

As a result of these discussions, a project was launched a year after the first meeting that has resulted in a computer program called openlogbook. Now being “beta” tested, it allows multiple streams of data from an experiment, such as nanotubes manipulated in a scanning electron microscope, to be annotated and stored – with Grid technology if necessary – and easily reviewed for subsequent analysis. Serious play is still being used at regular intervals to shape the future course of the project.

Physicists at play

In another instance, a group of researchers and managers at the CERN particle-physics lab in Geneva used serious play to help them develop plans for a new industrial partnership. The process revealed a big generation gap among the participants. Younger staff and PhD students saw the new industrial

partnership as a chance to inject a new dynamism into the organizational culture. Directors and other more senior participants, however, wanted to return to a tradition of strong industrial partnerships that had been promoted in the past. The serious-play session helped reconcile both points of view and led to a number of good ideas being, quite literally, placed on the table. These ideas went on to shape the industrial partnership itself.

Both sides in this discussion, young and old, went away with a better understanding of the others experience and aspirations. One senior manager, for example, was openly taken aback by a construction of the organization made by a PhD student, which appeared far more hierarchical than his own construction. It is unlikely that the student would have had the courage and the ability to express this opinion quite so colourfully in words alone.

LEGO is not a panacea, and not all strategic discussions using serious play are equally productive. In one case, for example, the same strategic project was treated first by senior members of the organization, and then in a separate session by undergraduate students working on the project. The contrast was clear: the students were much more imaginative in their constructions and more open in the ensuing discussion than the

more senior stakeholders. Presumably, issues of budget, territory and natural competition affect managers more than students.

We also found that while some senior research managers are enthused by serious-play sessions – immediately wanting to implement the technique elsewhere in their organization – others are relatively unimpressed. One session that was planned for a multi-organizational collaboration had to be cancelled because a key player refused to take part, knowing that serious play was going to be used. Still, even such setbacks can be revealing about the strategic challenges facing a research project.

Implications for research strategy

A classical view of strategy from the business world is that top management formulates it and the rest of the organization executes it. Although many business leaders have tried to move away from this mindset in recent years, it remains common practice. Strategy work is often heavily biased towards rational, analytical thinking, in which leadership teams analyse and assess the situation and outline a plan to achieve competitive advantages. In other words, strategy is in most cases about developing a plan.

Our experience suggests that serious play can create the conditions for scientists and research managers alike to be more imag-

inative and playful about serious matters in ways that conventional strategy discussions do not allow. It can also enable such people to be more perceptive and effective in developing robust strategies. More specifically, the lesson of serious play is that the medium matters.

PowerPoint slides can only capture and express a limited part of what we mean, no matter how many clip-art objects they contain. Purely verbal discussion of strategic issues also has limitations. When constructing what we think and perceive with our hands in three dimensions with LEGO bricks, we discover new channels for communication that reveal different aspects of strategic problems and stimulate new solutions.

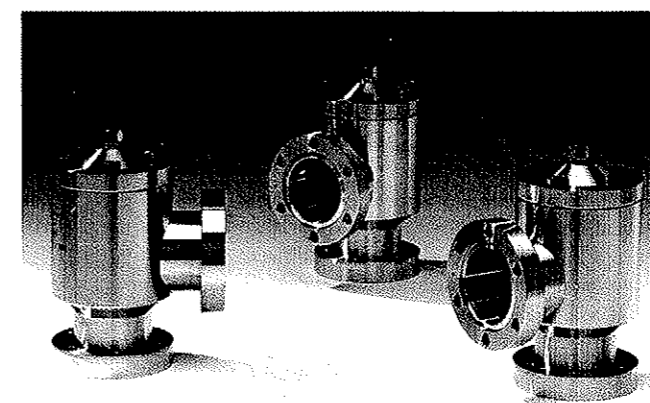


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