Foresighting for Meaningful Innovation:
SMARTlab as Case Study

Suzanne Stein with Lizbeth Goodman

INTRODUCTION

For the last few decades foresighting has been used in private and public organizations to understand and respond to the changing contexts that they could find themselves in. Whereas this was a predominantly reactive stance, foresighting techniques are playing an increasingly active and formative role in forging desired futures. It can be a particularly helpful tool for artists, scientists and business strategists and designers in guiding curiosity and situating innovation in a meaningful socially-aware seat. For example, we can look at the expertise and projects at SMARTlab, University of East London and how these draw upon emerging trends to capitalize on them and direct us to a better, future world.

FORESIGHTING AND ITS ACTIVITIES
By Suzanne Stein

Foresighting constitutes a range of techniques and approaches deployed for a common goal: to establish a shared understanding of the forces shaping the future for the purposes of aiding decision-making. It gives us a means to identify change in society over time so that we may be better prepared to meet a future state, encourage its development, or to counter-act it, changing the course of change itself. To be clear, it is not just used for planning and strategy work but also used in the design process – guiding the shape, function and possible use of an object, system, or place. The future horizon upon which one gazes (how far one's gaze is cast), is dependent on the phenomenon in question and the time it takes to effect change. For example, a city might have a 50- or 100-year horizon to consider. It deals with infrastructures' expensive and pervasive networks, spaces that are made of fairly permanent materials, and research and investments that might require decades to take hold. A computer or handset company may look at a five- to 15-year horizon – calculating development time plus lead-time for R&D, planning and buy-in. A web 2.0 company might be identifying new extensions and adjusting its stance in very short cycles – giving the sense of a perpetual beta.

Foresighting is in vogue these days, as it typically is in times of uncertainty and crisis where a

common understanding of potential forces/factors and vision setting are critical for taking action. Van Notten (2005) for example, discusses the use of scenario work for responding to social discontinuities, or Wildcards, where the unexpected has happened. It also becomes an attractive discipline where an organization finds itself in the throws of increased competition and needs to develop more discerning and meaningful ties to its stakeholders. We can see this now in the telecom industries where a near monopolistic privilege is breaking down with many heralding the impending telepocalypse. These issues: of increased uncertainty, crisis and competition promise to be hallmarks of our times for many years to come. It then appears that foresighting might prove to be a technique that is deployed with greater or lesser degrees of formality in our efforts of creation, particularly at a time when the stakes seem very high. See, for example, the now widely circulated video on *YouTube*, by Johnq5, wherein he reframes the debate on global warming, stepping its audience, regardless of political leaning, through possible outcome and to a singular conclusion on taking action.

There are three associated and distinct foresighting activities. One is Crystal Ball Gazing, used to help people anticipate change or events and discern implications; trend scanning and monitoring are established techniques associated with this activity. It is the 'classic' form of foresighting and forms the basis of its association to professions like Futurism. The second is Alarm Pulling, where a present activity or movement has occurred and foresighting helps to identify the magnitude of significance and to galvanize groups into action. In this case, questions such as: 'Is this a fad or a trend?' or 'Is it part of a larger issue moving forward or is this an isolated phenomenon?' are confronted. The third activity is Crowd Controlling, where it guides the shape of inquiry and debate by red-roping fresh issues in and pushing standard assumptions out of the frame of inquiry. Here practitioners are actively seeking corollaries and re-defining categories; and the process of evidence-based inquiry used to stimulate out-of-the box thinking becomes its most attractive and valuable feature. All of these activities require a base-line methodical approach, which can be accomplished through a range of techniques. But what is most important is that the frame of context is wide and inclusive enough to avoid the solipsism of everyday thinking that foresighting is meant to challenge. To this end, regional comparisons, as well as multiple and diverse sources of data, and the combination of different and new techniques may be required.

Common Techniques

The most common forms of foresighting techniques include 1) trend scanning, monitoring and tracking, where trajectories of change are monitored over time and 2) scenario development, where multiple possible future worlds are compared. Typically, trends (and the underlying drivers of those trends) are used to characterize these worlds; often, the most uncertain of these form the main basis of difference through the identification of differing hypothetical evolutions (van't

Klooster and van Asselt, 2005).

Perhaps trend work is perhaps the most deployed (both formally and informally) because it is highly malleable to activity, application, or purpose. As a result, it is also increasingly commoditized. There are many high quality think tanks and online tools that offer such services out there (e.g. The Institute for the Future and Shapingtomorrow.com). Trend scanning is perhaps itself becoming a cultural past-time (as it is the subject matter of many forms of information and entertainment media) as we seem to enjoy watching ourselves under a bell jar (as one big open-air sociological experiment). And while the identification of trends *may* be getting easier; the difficulty lies in determining the specific impacts and implications of these, as well as ensuring that the knowledge is transferred and retained for activation when needed. Note that caution should be taken with off-the-shelf packages – both in terms of suitability, heterogenaity, and identifying issues that might otherwise blindside. Of particular note here are the emerging practices and uses of prediction markets, where the authoritative seat of the Expert is toppled by the collective "wisdom of the crowds," where multiple and varied opinions and vantages are able to predict the probability of future events (Surowiecki 2004). These markets are surprisingly accurate, precisely because of the combined partial and differing knowledges. Any good foresighter knows that she is as good as her sources; prediction markets or other techniques that include a range of data points or views and, better still, aggregates them (as is essential for any complex modeling) hold out promise.

Although foresighting practices are often considered in-house matters (trade secrets), good surveys of practices, practitioners and issues in the field exist; such as Social Technologies' "Developing Organizational Foresight" Meeting Report (2005) and the Henley Centre's "Benchmarking UK Strategic Futures Work" report to the UK government (2001).

SMARTlab

Although not traditionally thought to be used in artistic practices, formal foresighting techniques are increasingly finding their way into these spaces – sometimes by virtue of collaborations (because, although often elusive, artistic works are increasingly reviewed by foresighters as a legitimate source of social understanding) and sometimes as a substantive method for guiding the artistic inquiry and exploration in its own right. SMARTlab, a Digital Media & Creative Technology Innovation Centre, is an example of an organization that is embracing formal foresighting capabilities and methods in its creative process and to guide meaningful innovation. It runs a practice-based PhD programme and research centre for artists and technologists working in artistic domains; and with its aim to create socially inclusive, sustainable projects, it runs a suite of community outreach and digital inclusion projects. Throughout, a moral agenda of using

technologies (and other expressive forms) for the social good reigns. Typically it aims to use innovative thinking and technologies to protect against disenfranchisement.

The method of the SMARTlab is described in detail by our many faculty and PhD students and the performers who have engaged in what is now called "the choreography of creative chaos" for social interaction in our new book: EMERGENC(I)ES: The Rise of New Media Art/Tech Research Cultures, by Lizbeth Goodman with Christopher Hales, Leslie Hill, Sol Haring, Susan Kozel, James Swinson et al. (forthcoming from MIT Press in 2008).

The moral or ethicasl orientation of SMARTlab already demands that the team keep themselves abreast of social change and movements; of technologies available and the possibilities they may afford; of macro political, environmental and economics, as well as business issues and models that might provoke a change of status quo on either of these two fronts of social inclusivity and well-being, as well as technological opportunity / accessibility.

At the broadest level SMARTlab contends with the contradictions of how technology both threatens, and is placed at the service of enhancing safety, security and well-being. One of the main ways in which this is so is under the rubric of 'Access and Participation'. This entails monitoring issues across the above mentioned categories that might contribute to narrowing or broadening the digital divide, including looking for factors as to how, when or why and how easily can people move on or off the grids of our Information Society. Note that this movement off grid can be one that is elective and possibly fostered by the need for independence from crumbling infrastructures of cities, by the need for anonyminity in fear of privacy breeches or terrorism, and by the need to develop parallel and secure systems of water, energy, and communications. The project discussed below also address this other, nested theme that has a major effect on Access and Participation: Privacy and Disclosure. The concern here is how to strike the appropriate balance, or how to afford anonyminity and presence at the same time.

Lost&Found (lead by Lizbeth Goodman) is a game that joins top down authorities with bottom-up movements to locate missing children. Currently in development, it draws upon recent enabling social and technological trends in its design. First, it takes advantage of the pervasive and mobile technologies of sousveillance (coined by Steve Mann), such as the recording and distribution capabilities of our cell phones. This is a newly created 'Panopticon for Everyone!!' situation (where Bentham's ingenious prison plan in which the guard can see all prisoners from the central position disavowing any of them to retain privacy – is now extended technologically to all of us to play prisoner, and to some extent, guard at the same time). *Lost&Found* harnesses the bottom up movement with the top down system, wherein Londoners are already captured several hundred

times a day. By combining these networks and new tracking technologies of GPS that will also become increasingly ubiquitous by the time this work launches, it has extended the communications notices of lost children on milk containers into a powerful and effective system. Part of the success of this innovation will also depend on the inclusion of a 3rd party (and system) to ensure that people can participate without being tagged or disclosed; their own safety, privacy, security may be at stake. Despite the fact that this work creates a counter-trend to the rise of the use of ICTs as stalking tools, part of the design challenge becomes: How to ensure that people, including those being found, don't become more vulnerable in the system?

The value of trend tracking to this project has been the fact that it has helped to establish strategic direction and design criteria. The project takes advantage of new forms of sociality (which includes sousveillance, social networking and a pervasive spirit of game and play) with new technologies (including GPS and ubiquitous surveillance technologies such as image capture, relay and distribution systems) to tackle an older and persistent social problem. In fact, the project has been on the burner for 12 years but had to wait for the moment, through Crystal Ball Gazing activities, for the right social and technological opportunities to be launched. It has engaged in Alarm Pulling and Crowd Control to the extent that it has rethought the value, meaning and significance of some of the socio-technological trends – creating new uses and positive counter-movements. For example, here, the extended panopticon is put to good social use, social networking is saved from the magnetism of social frivolity, and top-down authoritative systems can provide positive mechanisms for collaboration and be put at the spirit of bottom-up collective movements without compromising the need for anonyminity.

Although this work began with more informal scanning of future possibilities, the power of trend scanning has become evident over time. SMARTlab has begun to build formal foresighting techniques, beginning with trend identification and monitoring, into its projects. But as it builds these formal capabilities, it has also begun to offer these services as part of its knowledge transfer and collaboration with the local communities, institutions and businesses to further drive meaningful and sustainable innovation. To conclude, we can see that foresighting can help (to not only identify but) to prepare a positive response to social and technological movements. Its adoption into centres of innovation, such as SMARTlab, is a natural fit where it can be put to the service of creating strategic and design guideposts to meaningful innovation in technology and in creating a better future.

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Authors

- Suzanne Stein, Canadian, 1969, Research Fellow in Mobile Technology

Futures, University of East London, SMARTlab, www.SMARTlab.uk.com,

suzanne@SMARTlab.uk.com

Suzanne comes to UEL from Nokia where she was working with both corporate strategy and

design functions to think about the future possibilities of their handsets, as well as the London

School of Economics where she has been researching the emergence of games as a mainstream

expressive form. She also lectures at the Canadian Film Centre in their new media department

and has worked as a Mentor in a national Interactive Project Lab in Canada. She was also the

Canadian Juror for the World Summit Awards, a UN task force, on innovative content in 2003 and Moderator in 2005. Previous publications include two chapters for the e-content: Voices from the Underground series edited by Osama Manzar and Prof. Peter Bruck, about the state of ICTs in Canada. She is presently working on a book proposal on Social Inclusivity and Mobile Gaming for publication by The MIT Press in 2008.

 Prof Lizbeth Goodman, American, born 1964, Director, UEL, SMARTlab, www.smartlab.uk.com lizbeth@smartlab.uk.com
Chair in Creative Technology Innovation, Director - MAGIC Gamelab & Innovation Centre, & Director of Studies for the UEL practice-based PhDs in Digital Media, Performance Technology & Informatics. Her main field of speciality is the creation of learning games developed WITH, not only for, people with disabilities and 'non-standard gamers'. She is widely published, with many years of BBC experience, and is a performer/director and PI of projects for and with NESTA, BBC, Microsoft, Lego, Futurelab, SGI, the Wellcome, et al. She directs the GLAM (Games, Life and Media) Academy, making games for the 2012 games. She is series editor of Emergenc(i)es for MIT Press.