



Red Teams: Toward radical innovation

July 2005

Executive summary – Red Teams assume the role of the outsider to challenge assumptions, look for unexpected alternatives and find the vulnerabilities of a new idea or approach. By consciously working to assume another perspective and out-do the standard team, they provide one means to getting “out-of-the-box” views and insights.

This Executive Technology Report is based on a personal essay by Peter Andrews, Consulting Faculty Member at the IBM Advanced Business Institute in Palisades, New York.

Disaster can force you to imagine the unimaginable. Unfortunately, the price is high, which is why Red Teams have come into vogue. While some Red Teams are merely review panels, the more ambitious ones are all about challenging assumptions, finding vulnerabilities and actively finding unconventional means to get a jump on mainstream (or Blue) planning teams. One key element is assuming an adversarial posture, taking the perspective of the enemy or competitor.

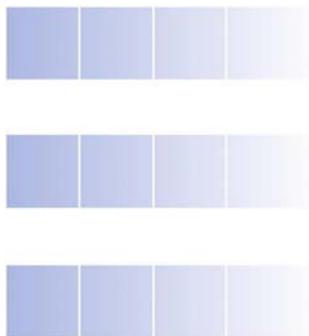
The U.S. military has been using Red Teams to test their planning for over 30 years (and longer, by other names). They have received new attention as a critical tool for fighting terrorism, but for businesses, they can help provide competitive advantage, especially as a means to expand exploration of innovations.

The key benefits of a Red Team are:

- Identifying significant vulnerabilities
- Discovering new uses for innovations
- Challenging taboos and assumptions
- Providing a minority report on a new concept or idea
- Revealing the consequences of different perspectives; in particular, the perspectives of those with different goals and risk profiles.

Red Teams can work at different levels – strategic, operational and tactical. They can goad a Blue Team to be more creative. They can help to anticipate and explain “irrational” actions and choices by adversaries. In addition, they can help to identify, train and tap talent for the organization, talent that is vital in a fast-changing environment.

The success of a Red Team depends on its composition, its support from management, its relationship with the Blue Team, the goals, the available information and the rules of the game:





Composition – Putting together an effective Red Team is as much an art as a science. There is a need to include experts, but there also must be room for people who ask naïve questions. Red Team members need to be able to inhabit the roles of adversaries and risk delivering bad news, but they also must stay on good terms with all parties. They need to understand the mindset and cultures of both their own organizations and the real-world adversaries. They need to be capable of detailed critical analysis, but they also need to be imaginative and iconoclastic. Most of all, they need to have the capability to communicate surprising concepts in clear, compelling language.

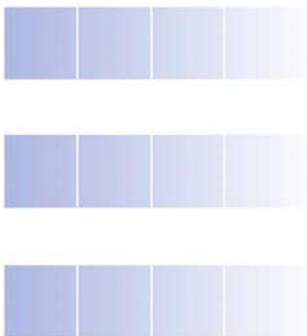
Management support – The Red Team must have the authority and standing to get a fair hearing for its ideas and concepts. For most organizations, this means someone high up in management, but generally not the direct manager of the Blue Team. In addition to enabling a fair hearing, the management must also provide material support, proper staffing and access to information/experts. And, they must provide continuity and stability or the Red Team may find itself blocked and ignored.

Relationship with Blue Team – The Red Team must have the trust of the Blue Team. Without trust, the Blue Team will hide key data and be reluctant to incorporate the views and insights of the Red Team. At the same time, the Red Team must not be co-opted by the Blue Team. It must maintain a level of independence and a willingness to make unpopular statements.

Goals – Ultimately, the required deliverables of the Red Team must be defined and there must be some measures of success. This does not mean that the Red Team cannot cross boundaries and provide more than was agreed to, but there must be a level of accountability. The Red Team needs to know what is promised and deliver on those promises.

Available information – There are times when the information the Red Team has available is restricted. It makes good sense that a Blue Team, creating a computer security system, would not need to reveal every aspect to a Red Team that is assuming the roles of black hat hackers (those people who would attempt to compromise system security without authorization). On the other hand, providing the Red Team with an open book on innovation plans makes sense. In fact, regularly meeting with and working with the Blue Team can benefit both teams, especially if a healthy competition develops. A sure sign that things are working well is if the Blue Team begins to incorporate and anticipate Red Team approaches as it pursues its own work.

Rules of the game – Given the competitive nature of the teams, the rules of engagement must be clear with regard to information, judgment of success, what comprises proof and when/how opinions and insights are offered. In addition, the





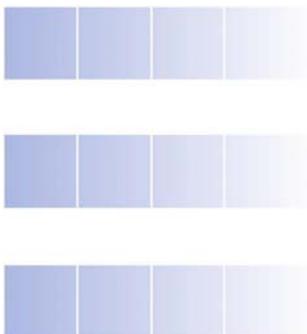
consequences – especially with regard to rewards and career advancement – must be stated up front.

Creative Red Teams will look at a variety of aspects that affect success in the real world – culture, technologies, needs, rewards, laws, market research, risk factors and available resources. Their biggest payoffs will probably come from identifying assumptions and digging into the roles of adversaries. Unexamined assumptions are usually the biggest culprits in narrowing investigation and leading to tunnel vision: things that could never happen, logical chains that can't be circumvented, values, taboos, false definitions and rules, to name a few.

By researching the adversaries – perhaps including people who are not even on the radar screen – motivations, connections, different contexts, different values and risk factors can be explored in new ways. In fact, the best Red Teams are able to inhabit the roles of adversaries in ways that approach good acting.

Getting “out of the box” isn't easy. The U.S. Department of Defense, in a review of Red Team experience, has identified many ways that a team can go wrong. They found instances where the Red Team did not take their assignments seriously, where they were “captured” by the Blue Team, where they become marginalized with no real impact, where they did not get enough inside information to be credible and where teams violated trust by leaking information. There were some teams that did not have quality memberships and others that failed in their objective to step into the shoes of adversaries.

In addition, Red Teams require commitment and real investments, most notably of talent. However, the Red Team can come up with insights that provide genuine competitive advantage or could even disrupt the marketplace. For those who are in a relatively stable environment and those who do not have a means to take radical ideas and turn them into action, Red Teams are not a good use of resources. But in an age of hypercompetitiveness, with regular changes in technologies, laws, sourcing options, the social/political environment and access to talent and resources, Red Teams are beginning to take their place as an essential tool for many businesses.





Technology to watch
Black hat hacking
Penetration testing
Red and Blue Teams
Security cracking
Simulation
Visualization

Related Web sites of interest

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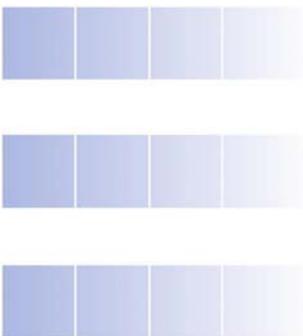
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Executive Technology Report is a monthly publication intended as a heads-up on emerging technologies and business ideas. All the technological initiatives covered in *Executive Technology Report* have been extensively analyzed using a proprietary IBM methodology. This involves not only rating the technologies based on their functions and maturity, but also doing quantitative analysis of the social, user and business





factors that are just as important to its ultimate adoption. From these data, the timing and importance of emerging technologies are determined. Barriers to adoption and hidden value are often revealed, and what is learned is viewed within the context of five technical themes that are driving change:

KnowlEdge Management: Capturing a company's collective expertise wherever it resides – databases, on paper, in people's minds – and distributing it to where it can yield big payoffs

Pervasive Computing: Combining communications technologies and an array of computing devices (including PDAs, laptops, pagers and servers) to allow users continual access to the data, communications and information services

Realtime: "A sense of ultracompressed time and foreshortened horizons, [a result of technology] compressing to zero the time it takes to get and use information, to learn, to make decisions, to initiate action, to deploy resources, to innovate" (Regis McKenna, *Real Time*, Harvard Business School Publishing, 1997.)

Ease-of-Use: Using user-centric design to make the experience with IT intuitive, less painful and possibly fun

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