

# “Business wargaming”: simulations guide crucial strategy decisions

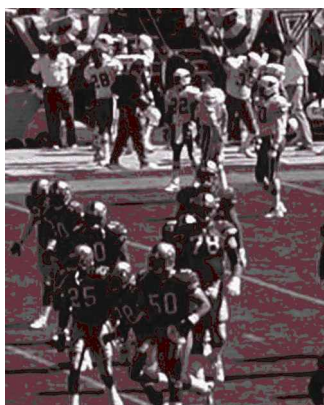
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*Wargaming is a standard training tool to prepare military officers for real situations and to help armed forces develop and test plans. During recent years, business too has increasingly recognized that wargaming can be a valuable process to support planning and decision-making. This article explains the concept of “business wargaming” and describes how Jay Kurtz, President of KappaWest facilitated a wargame to help an information technology company’s top executive deal with a particularly difficult strategic situation.*

**W**ithin three weeks of taking the reins of InfoTech Devices (ITD), Inc.[1] the company’s president discovered that its key division faced some serious problems. In a series of interviews with customers, suppliers, senior staff and other employees he learned that:

- ITD was one of more than ten ventures competing for the same basic market.
- One of the competitors had close to 60 percent market share while ITD had less than 5 percent. None of the other smaller players had more than 8 percent.
- Like almost all of its competitors, the division’s basic strategy was aimed at taking market share from the leader, an obvious target.
- Some of the other small players in the market were parts of much larger companies and were able to negotiate at least some attention in the channels. However, most others found it very difficult to do so.
- Although the division’s products were basically sound, their strengths were not significantly better than those of its competitors.
- Morale in the division was low, and the quality of leadership was suspect. Most managers remained with the company when it was spun out from a much larger IT organization, and carried with them a large-company mentality that was inappropriate for the new smaller venture.
- The division had piles of information about competitors. But, the quality of information was inconsistent. Little had been analyzed to generate useful intelligence. The quality of its market research was even poorer.
- Every executive and senior manager the president had interviewed offered different ideas about what it would take to fix the situation. Suggestions included investing in new technology, outspending competitors on advertising and promotion, accelerating design changes, and making acquisitions to fill gaps in the division’s product line.



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Shortly after completing his initial analysis, the president considered undertaking either a scenario planning exercise or a standard planning process as a means to address the firm’s problems. But he decided that neither would be ideal given the company’s circumstances. His reasons: both would take too long, and neither one would involve his entire management team in a learning exercise to confront, understand and deal with the dynamics of the situation. Having had a successful experience with wargaming during a previous job, he felt that it was the best process to employ in the current situation. He was convinced that wargaming would help his management team identify stronger and weaker players in the firm’s markets and experiment with tactics that could improve its market share. So he moved quickly to organize and conduct a business wargame.

The results of the wargame indicated that ITD’s best strategy was to grow by taking business from the other smaller players, without directly attacking the very powerful industry leader. When it was actually put into operation over four years this strategy helped the company to survive and become a strong number two in its market.

#### What is a “business wargame”?

A “business wargame” is a role-playing simulation of a dynamic business situation. It involves a series of teams, each assigned to assume the identity of an entity with a stake in the situation. A typical wargame will usually involve several “rounds”. These rounds might represent different time periods, such as months, quarters or years. Or, they might represent different phases in the life of a product launch, a plan to make an acquisition, to win a major order, or some other venture.

After extensive research and preparation of materials by a company team working with a facilitator, wargames usually require two to four days of intensive interaction by between 20 and 50 active participants (the team members).

There are several unique characteristics of a business wargame:

- A wargame involves intensive “competition” among five to ten teams, each representing distinct stakeholders such as the market, key customers, suppliers, strategic partners, different competitors, channels and regulators.
- The teams don’t interact merely on the basis of quantitative information. Role-playing allows cultural issues, egos and other subjective factors to be reflected in the development and assessment of strategies.
- The wargame process forces a rigorous examination of a situation from several different perspectives, not just the view seen by the organization sponsoring it. By attending to alternative perspectives, some of them hostile, the company learns to recognize opportunities and threats that would never have been noticed using an “inside out” approach.
- Although business wargames are computer-supported, they are not computer-driven. No matter how well conceived, a computer model will not generate the very broad range of ideas developed by the different teams, each aggressively competing to outsmart the others.

Wargames are most often conducted at two points in an organization’s planning process. At its outset, a wargame can be especially helpful in converting data and information that a company might have about its markets, channels, competitors, etc. into actionable intelligence that will be used in subsequent planning. Alternatively, after a basic plan has been developed, a wargame

can be conducted to test the plan to ensure that it is robust enough to succeed in any realistic combination of events or actions.

### An overview of the ITD wargame

The ITD wargame's primary purpose was to understand the real situation the division faced, so it could develop and test a successful strategy. Morale being a serious problem, the president hoped the wargame would produce credible evidence that the division could succeed. He believed that division managers would then gain confidence that their situation was not hopeless. He also wanted the experience of developing and testing a successful strategy in the wargame to imprint his expectations and leadership on his team.

To achieve these purposes, the wargame was developed and conducted to generate a series of both "hard" and "soft" deliverables. The hard deliverables were captured throughout the wargame and documented at its conclusion in an "after action report". They included:

- A list of the major events or trends that could occur in the market, and major strategic moves each competitor could make in pursuit of its interests.
- A rough estimate of the probability of each event (high, medium, or low), and its potential impact on ITD.
- A summary of specific steps that ITD should take, including for example:
  - making key changes to its high-level business strategy;
  - additional intelligence work it should undertake;
  - tactical steps it should take to improve performance in the near term; and
  - contingency plans that it should develop to deal with lower probability events or competitive moves that would have very significant impact if they did occur.

The soft deliverables – a report on the changes in the participants' "hearts and minds" during the wargame – included new insights, attitudes and knowledge they gained, such as:

- increased confidence the division could succeed;
- acceptance of the need to make major changes in the way the division did business; and
- Ability to use selected wargaming concepts and tools in other planning-related work.

The new president also saw the wargame as a useful way of learning much more about his division's markets, competitors and issues, as well as its strengths and weaknesses. He also recognized that it would help him to begin a more rigorous analysis of his executive and senior management team.

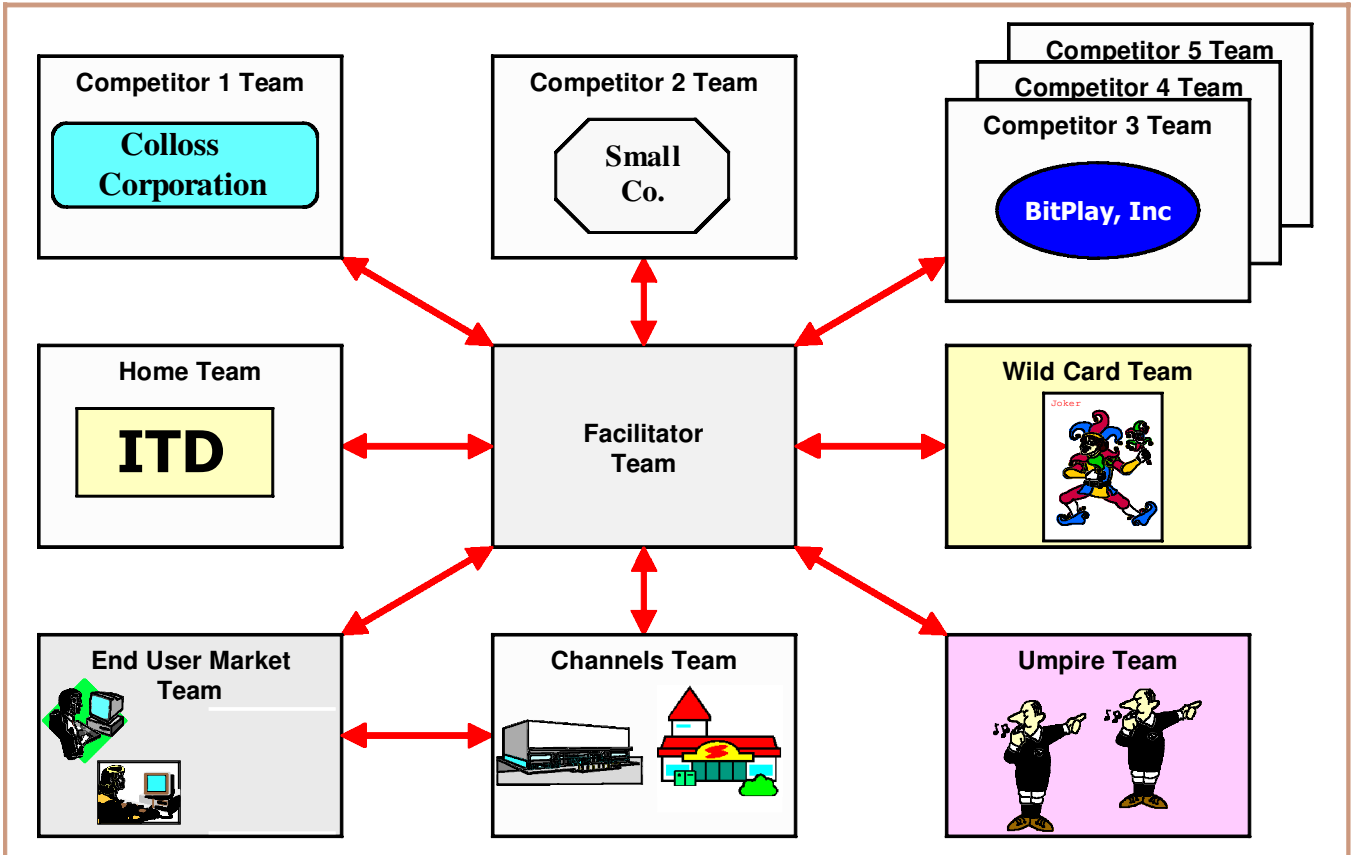
### Teams

To meet the objectives set for the wargame, the planners decided that each of the teams shown in Exhibit 1 should be created.

As shown, the wargame included teams representing ITD itself, the market leader, several of the smaller competitors – each with different characteristics, and a "wild card" competitor. The latter was assigned to reflect a fictional company that was not currently in the market, but which could enter it as a major new form of competition that could shift or disrupt the market.

The game also included teams to represent the end-user market, and the channels that the different competitors employed to reach the market. As shown in Exhibit 1, all teams worked through the facilitators, and only the "market" and "channels" teams were permitted to communicate directly with each other without "umpire" team approval.

The "market", "channels" and all five "competitor" teams played active roles in the wargame. The "umpire" team had a different set of responsibilities. Its primary function was to enforce the rules of engagement set for the wargame, to rule on the feasibility of the more creative strategies suggested by the "competitor" teams, and to resolve disputes among teams. It also



determined whether proposed mergers, acquisitions or other forms of strategic partnership between two “competitor” teams would be permitted.

The “facilitator” team’s primary role was to introduce the processes and tools used in the wargame and to coordinate all activities during it.

### Wargame scope

To meet the ITD wargame’s purpose, the planning team decided to focus on the next three years. In their opinion, if the division did not achieve a much more significant position in the market by then, it would probably be out of business. This led to a decision to have three “playing” rounds in the wargame, each representing a calendar year. It was determined that the primary “market” should be North America. Although ITD had overseas operations, these markets, at least in the medium term, were secondary.

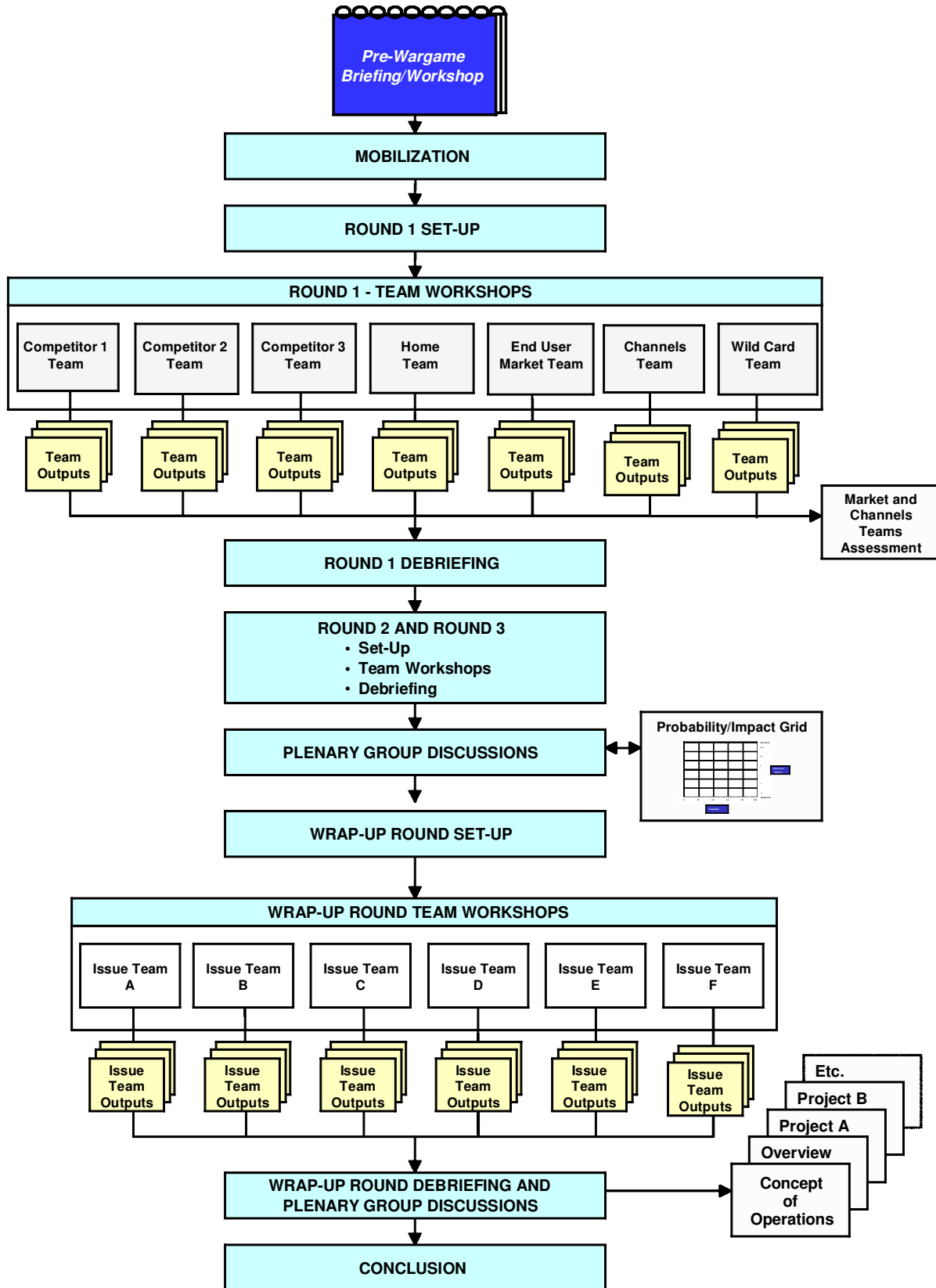
### Wargame format

Exhibit 2 shows the basic structure of the ITD wargame that began with a half-day “pre-wargame briefing” for participants three weeks before the wargame.

The wargame began with a “mobilization” session that included:

- introductory comments by the president;
- an intelligence update by members of the wargame’s planning staff; and
- set-up instructions by the facilitators.

Then, each team moved to its “war room” to undertake its round 1 assignments. These required each “competitor” team to:





- assess the overall market situation and business environment from the perspective of the company it represented;
- anticipate the strategies that each of its competitors might use;
- prepare for, and conduct a meeting with each of the “market” and “channels” teams to gather additional information and to begin testing the feasibility of new strategies;
- conduct a preliminary *triage* of the overall market, to determine those segments or channels in which it would concentrate its efforts, which it might continue to serve, and which it would abandon or ignore;
- develop and evaluate alternative offensive and defensive strategies that it might use in each key segment or channel; and
- invest limited resources to support its strategies.

The latter step required each “competitor” team to allocate its assigned resources among the components of its strategy. These might involve for example, increasing advertising and promotion aimed at either end users or the channels, increasing service levels, improving products, or increasing the size of its sales organization.

Meanwhile, the “market” and “channels” teams undertook a somewhat different set of tasks. For example, the “channels” team was required to select the criteria that would be used to determine shelf space that would be made available to each “competitor” team.

At the conclusion of round 1, the “market” and “channels” teams analyzed the decisions, actions and investments made by each “competitor” team and determined how market share would change as a result of their combined efforts. “Market” and “channels” teams also assessed how well each “competitor” team balanced the need to create “pull” among the different segments of the end user market, while stimulating “push” through the channels.

During the round 1 debriefing, each “competitor” team presented a brief outline of its decision. This was followed by a review of the analysis conducted by the “market” and “channels” teams, and the introduction of an updated market and competitive map.

In addition, the “umpire”, “market” and “channels” teams met to determine what changes should be made to the resources allocated to each “competitor” team as a result of its success or losses during the round.

At this point, the time period advance ahead one year and round 2 began. It followed a similar pattern to round 1, although additional tasks were inserted in to the team assignments. After round 2 was over and a debriefing was completed, round 3 (the third year) began.

### Readopting the perspective of ITD

At first the competitive cycle continued much as it had in rounds 1 and 2. But in the latter part of round 3 all teams readopted the perspective of ITD. Each was asked to develop a list of the more critical events, trends or competitor actions that could realistically occur based on what the team had learned through the wargame. Teams then estimated the probability that each event, trend or action would occur and the positive or negative impact on ITD if it did. This resulted in the clear identification of a set of very significant opportunities ITD could exploit, obstacles it would have to overcome, and risks it should work to reduce.

At the conclusion of the round 3 debriefing, the plenary group met to review all such suggestions and to develop a probability/impact grid to help understand the relative importance of each. With this intelligence, the senior ITD personnel decided which opportunities, obstacles or threats required additional assessment during the “wrap up round” of the wargame. Each of these was then assigned to a new team of participants selected on the basis of their expertise and functional responsibilities.

During the wrap up round, each of these new teams was asked to create a “profile” that captured all the major insights it developed about the issue assigned to it. These profiles defined for example:

- a more comprehensive description of the issue;
- a more detailed estimate of its probability and potential impact on ITD, including factors that would affect each and its timing; and
- suggested actions to deal with it.

The purpose of these profiles was to serve as a valuable source of information for the individual or team assigned to create the plan subsequent to the wargame.

After the debriefing of the wrap up round, the plenary group met once more to create a basic “concept of operation”. This outlined the basic follow-up plan of action including:

- key opportunities that would be exploited;
- moves that would be made to re-orient the division’s market and product strategies;
- critical organizational and development changes that would be made; and
- contingency plans that would be prepared to deal with less likely but potentially very significant events.

### ITD wargame outcomes

The ITD wargame proved to everyone’s satisfaction that it was likely the division could succeed, and that it would be able to do so without merging with, or acquiring one of its competitors. More importantly, it demonstrated strongly that ITD must shift its strategy in order to succeed. In the past, ITD, along with the other smaller players in the market, had been trying to grow share by taking business from the leader. The wargame proved this approach was not going to succeed. It demonstrated instead that ITD should concentrate its efforts on taking business from the other smaller players. While they continued to attack the leader, they would expose their flanks to assaults by ITD. Given the aggregate share held by the other small players, this approach would allow it to grow to become a significant power in the market[2].

This approach resulted in new operational level plans within the division’s marketing, product development, sales and other departments. The teamwork developed during the wargame also helped to ensure that the operational level plans developed by each function were more closely coordinated with each other.

The intensity of the wargame and the demand on all participants to think and act using an aggressive but disciplined, creative and logical process also helped the president in another way. He was able to identify the stronger players in his management team, and assess their skills.

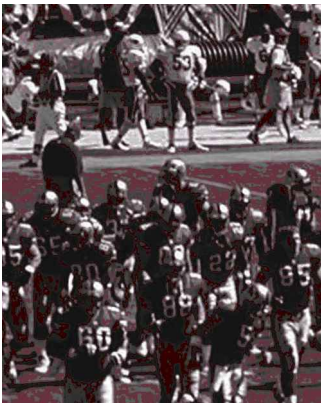
Finally, the wargame made great progress in building increased confidence among participants that the division could and would succeed, and increased respect for its new leader.

The ultimate success of any wargame of course depends on what is done with what has been learned during it. In the case of ITD, the president ensured the following steps were taken:

- the new strategic direction was defined in more detail in an updated division strategic plan;
- specific “intelligence missions” were assigned and undertaken to ensure the division had the market and competitive information it needed to build effective operational level plans;
- the new strategy was used as a base for preparing and executing operational level plans that ensured the division’s marketing, product, sales, compensation and other efforts were all aimed at implementing the strategy;
- each of the “profiles” developed during the latter part of the wargame was assigned to an individual or small team to flesh out into a more specific, near-term plan of action, which was then executed.

### Key steps in a business wargaming project

A major business wargame represents a significant investment of time, cost and effort. In the case of ITD, the overall project involved the eight steps outline briefly in the accompanying chart



(Exhibit 3), and about two months of elapsed time. During this time, about ten person-weeks of facilitator and ITD effort was required to undertake the background research needed, to prepare all necessary materials and to make all administrative and logistical arrangements.

Total costs involved, less the time of participants during the wargame itself, were in the range of \$100,000.

Most major business wargaming projects require a comparable investment of money, time and other resources. They also follow closely the steps undertaken by ITD. Depending upon the complexity of the situation, the organization's experience in wargaming, and the quality of information available, the elapsed time from a "go" decision to a successful debriefing can be as short as three or four weeks. On the other hand, some have required up to four months to organize and conduct.

### Exhibit 3 Behind the scenes of the ITD business wargame project

A wargame played by participants represents only 10 to 15 percent of the time and effort involved in a business wargame project. Here is some of the behind the scenes work involved in the ITD Wargame project.

#### Step 1 – Wargame scope definition

The division president appointed a wargame planning team to define the purposes, a set of objectives and the scope of the proposed wargame, and to develop a plan, schedule and budget to "make it happen".

#### Step 2 – Wargame design meetings

Once its plan was approved, the planning team met with the facilitators and several subject matter experts to create the blueprint that was used to guide the development of the wargame. It also confirmed the wargame's date and the participants needed.

#### Step 3 – Wargame preparation

The planning team and facilitators undertook the research needed to provide the playing teams with the profiles each needed so that it could represent the market, channels or its assigned competitor as appropriate. It also prepared all other materials needed to conduct the wargame, including the wargame participant guide, all team assignments and supporting worksheets, as well as making all administrative and logistical arrangements.

#### Step 4 – Pre-wargame briefing and workshop

The president arranged for all designated participants in the wargame to attend a special one-day session about three weeks prior to the wargame. During it, he outlined the wargame's purposes and his expectations. The facilitators then introduced the concepts, processes and tools that would be used in the wargame. Then the planners presented comprehensive profiles of the market, channels and each competitor.

The session also included a mini-wargame based on a fictional but true-to-life situation to provide participants an opportunity to experience the process before moving into the "real thing".

#### Step 5 – Team preparation and presentations

During the weeks prior to the wargame, each team undertook a series of tasks designed to help get it "into role". For example, this required the competitor teams to conduct more research into the culture, current strategy, alliances and other characteristics of its assigned company that would help it to anticipate the moves it would make under a variety of situations. Each team then presented the output from its pre-wargame tasks to the president.

#### Step 6 – The wargame

#### Step 7 – Post-wargame documentation

A very large amount of useful material was created during the wargame. This was captured "on the fly" by the facilitators as each team presented its analysis and decisions at the conclusion of each round. The next step involved integrating all outputs in a logical and usable format in the After Action Report.

#### Step 8 – Post-wargame debriefing and planning

Within a week of the wargame, the after action report was completed and an informal debriefing was conducted involving the president, the planning staff and a representative from each team. This led to the definition of a series of specific tasks to ensure the lessons learned and decisions reached during the wargame were implemented, aggressively and with full commitment.

#### Exhibit 4 Other business wargaming examples

The ITD wargame was typical of a “strategic” level wargame. But there are many other ways in which a wargame might help a company, such as:

1. A biotech company conducted a wargame to anticipate how competitors would attack its flagship product as it neared the end of its patent protection. The lessons learned helped it to develop a strategy to reduce significantly the market share gained by other companies. Later, it conducted another wargame to help develop plans to launch a new product it had licensed from a smaller company for use in a very different area. The wargame raised very serious questions about the viability of the project and it was subsequently cancelled.
2. A joint venture involving a telecom manufacturer and a local communications company was one of several ventures competing in a huge developing market for wireless services. It had a relatively small share but recognized there was a very large opportunity if it moved aggressively and wisely. However, it was concerned about spreading its resources too thinly across many segments in the market. The venture conducted a wargame that helped it to identify where it should focus its efforts, how it could exploit segments where growth potential was greatest, and where larger competitors were less likely to be active.
3. A hospital chain faced a mix of “uncontrollable” factors, including rationalization of competition, changing demographics in its geographic area of interest, major changes in reimbursement policies and the advent of e-health information technology. Its CEO was concerned that his management team did not appreciate the significance of these changes and was not prepared to deal with them as it entered its new strategic planning cycle. It prepared and conducted a wargame that resulted in a major change in attitudes as the participants saw what could, and probably would, occur in the next few years. The new intelligence generated in the wargame led to dramatic changes in the chain’s strategic direction.

#### Conclusion

In the ITD situation, wargaming proved to be a highly effective approach to accomplishing a variety of purposes. The time, cost and effort in preparing a major wargame are substantial. But the potential pay-off is significant because in many cases the exercise tests and focuses strategy. So how did the ITD wargaming experience turn out over the long run?

Within four years, the division’s “King of the Pygmies” strategy was so successful that the industry leader began to recognize it as a serious threat. During this time, some interesting new trends had developed in the marketplace. Given the change in the situation, the president

#### Exhibit 5 Some important lessons

Some the key lessons learned from helping organizations to prepare and conduct business are:

1. Include a broad mix of functions and seniority levels in a wargame. But recognize that the value of a wargame depends very much on the active involvement of senior executives, preferably as participants on competitive teams. For top managers, learning through playing an active role is much more effective than getting reports on the results of a wargame from more junior personnel.
2. Ensure that each team really fully assumes the role of the organization it has been assigned to represent. It is critical that the team makes decisions in a way that reflects for example, the competitor’s organization, culture, traditions, values, alliances, momentum, ownership, not those of its own company. Never assume that a competitor will behave the way you would if you were in his or her place. The purpose of a wargame is to perceive evolving situations from different perspectives and through different lenses, giving players the opportunity to assess the situation as other stakeholders would.
3. Keep in mind that the wargame itself represents only 15 to 20 percent of the workload involved. The rest of the task involves preparation by the wargame planning staff and facilitators-this primarily includes extensive research and preparing all necessary supporting documentation.
4. Follow up every wargame with feedback to the participants. Make clear to them the action that has been taken as a result of lessons learned and decisions reached during the wargame. Doing so will ensure they recognize the value derived from the investment of their time and effort, making them more willing to participate the next time.

decided to conduct another wargame. This time, its purpose was to anticipate how competitor No. 1 might react to ITD's success as well as to other new realities in the marketplace, and how ITD could develop a new strategy to deal with the changed situation. The new strategy developed during the second wargame involved three basic components. The first was designed to seize and hold leadership in a new high growth segment of the market. The second was aimed at keeping the leader focused on protecting its own turf, reducing its ability to compete in the new high growth segment. The third involved building a strong relationship with a powerful ally.

This new strategy also proved effective. The division has continued to grow profitable market share while many of its original small fry competitors have abandoned the market.

### Notes

1. InfoTech Devices Inc. is a pseudonym for a medium-sized company that manufactures and markets a key component of personal and enterprise computer systems.
2. The division referred to this new approach as its "King of the Pygmies" strategy.