

# HUMAN CAPITAL™

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## Systematic Problem-Solving Process Helps Financial Firm To Solve Tough Problems

**B**oston Financial Data Services (BFDS), North Quincy, Mass., with 4,000 employees, is one of the largest providers of shareholder services to mutual funds and 401(k) industries. Jointly owned by State Street Corp. and software innovator DST Systems Inc., BFDS maintains more than 13 million mutual-fund accounts. Its clients manage enormous investment portfolios, while BFDS does shareholder record keeping for its clients' customer accounts. Needless to say, those clients require speed, responsiveness and quality.

BFDS found that hardware, software and interface problems were diverting too many resources and requiring too much time to solve. The Global Technology Division (GTD) of BFDS provides technical support not only for BFDS but for many of its money-management clients. One of the major problems was the fact that GTD personnel, located in diverse locations and each with specific technology responsibilities, lacked a common language and a common approach to solving technical and team problems. The result was much wheel spinning, lost time and short-term fixes for complex problems.

### The Challenge

As chief information officer of BFDS, Peter Quinn leads the GTD, whose mission it is to support all BFDS's internal data processing systems as well as all links with clients' systems. Although much of what Quinn's staff does entails standard activities and structured developmental projects, troubleshooting complex problems is often the most critical activity, and avoiding future potential crises is the most valuable skill.

Quinn's staff is spread throughout the company's several geographical locations. Even within a single location, employees worked in a highly independent manner with widely varying backgrounds and ways of approaching problems. "I walked the floor and watched some specific trouble-shooting projects," says Quinn. "Each team—and even each person—had a different approach to solving problems. At all levels, we were using different methods and terms. It took too long to analyze an issue and reach consensus on a solution."

Quinn found that the biggest and most complex problems were the hardest to handle, because they were most likely to cut across departmental and functional lines.

"We had all the problems that bedevil IT organizations: rapid technology turnover, significant change management challenges

and impatient users who needed their problems solved quickly," says Quinn. "Many times, in an effort to solve these problems, we were jumping to cause too quickly. Sometimes, we were right and sometimes we were off the mark. It was very much a hit-or-miss process. In one important case, a major electronic image and work management system went down right after a software change had been implemented. A great deal of effort and time was invested in finding the bug—a bug that didn't exist. A disciplined approach could have eliminated the software change as a culprit early on and enabled us to identify the real cause of the problem much sooner. This is just one example of how we tended to waste resources and to increase downtime. We needed to establish a solid foundation that was based on a common approach and common language for problem solving that could be adopted by all of our staff and teams across the division."

### The Solution

That was when Tammy Miller, an internal consultant at BFDS, found Management Methods Inc., a Boston-based organizational consulting and training firm. "Their systematic problem-solving approach looked like just what we needed," she says. Management Methods designed a custom strategy and curriculum specifically for the GTD. "Much of the training I've seen has had little lasting impact," says Miller. "But the systematic problem-solving process is so logical and straightforward that its usefulness was very obvious. Right from the start, all of our employees were truly engaged, and they've been committed to this process ever since."

Systematic problem solving was introduced in a big way in BFDS' GTD. All levels of employees, from the senior team to site support specialists and the help desk associates, participated in the series of intensive one- and two-day workshops. They left the session with a variety of no-nonsense tools they could use in a broad range of situations, whether working independently, in teams or in cross functional meetings. Arrangements were put in place for the continuous orientation of new employees and refresher training for existing employees. This follow-up demonstrates management's commitment that the problem-solving training wasn't just a one-time event but an ongoing way for GTD to attack its problems in a systematic and focused manner.

All GTD staff were provided with a comprehensive workbook

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and reference guide, including the grid, a one-page problem-solving worksheet to help them to navigate the process. “Whenever we tackle a new problem in our war room, we put up the grid to jump-start the problem-solving process,” says Miller. “It’s easy to follow and gives us the discipline and structure to work through the process for any type of problem.” The grid is also used explicitly in GTD’s weekly change-management meeting.

## The Results

Troubleshooting can and does occur everywhere in the BFDS’ GTD, but the more difficult, organization-wide problems end up in the GTD Service Center. The service center is also where systematic problem-solving is paying the biggest dividends. There, after a triage process, the most critical and difficult problems are assigned to the Tier 3 staff, which includes employee Debbie Williams.

Williams was on the job the morning a call came in about difficulties accessing a key system on scanners. Williams and her Tier 3 team went to work on the problem, quickly eliminating network changes as a possible problem. While they worked, more calls came in reporting problems with scanners, connectivity or both.

“Using the problem-solving system as our guide, we treated the problems separately while at the same time looking for a common thread,” says Williams. “We began to call internal and external clients and found there were additional problems that hadn’t been reported. We had a serious general failure affecting major clients as well as key internal systems.” Using sniffer traces, Williams and her team were able to identify a single core router that was the common element. Connectivity was fully restored for all users by mid-afternoon.

Downtime is always costly for BFDS, but some is worse than others. Bill Balfour, who’s responsible for the system interface to Digital Serial Tranceiver’s mainframe, recalls one specific example. “Late in the afternoon, one of my managers reported a problem in the data feed from a client to DST,” he says. “The problem affected a brand new mutual fund and raised the possibility that accounting for that day’s transactions would be delayed indefinitely.

“At best, the problem would be embarrassing for the client, DST and BFDS. At worst, BFDS could have significant financial exposure. Disciplined use of the systematic problem solving training enabled us to identify the key question early on: ‘What changed between yesterday and today?’ This led us to a single cause and a timely solution. Although we would have found the answer eventually without using systematic problem solving, it would have taken us much more time. It’s really systematic common sense.”

“Reaction to systematic problem solving has been uniformly positive and enthusiastic,” reports Quinn. “It’s worked time after time in diagnosing and solving tough problems.” Because it works and is so straightforward, some BFDS employees have internalized the process and employed it outside the workplace.

“BFDS’ use of systematic problem solving is a classic example of how it can benefit a first-class IT organization,” says Alan Green, president of Management Methods. “All of the elements for success are there. There’s strong and continuing senior management commitment and support. All employees, including new hires, are trained and then refreshed. The common approach is emphasized and then reinforced by practical on-the-job applications. And the service center personnel who use it every day assist their internal clients in applying it whenever they find themselves working together on a problem.”

“Systematic problem solving pays practical dividends every day in terms of reduced downtime and more efficient use of staff,” says Quinn. “For us, it’s a living, breathing process our people have taken to heart. And there’s been a very valuable side benefit. By teaching a common approach and language and encouraging alignment and consistency, it’s improved teamwork in our company in a meaningful way.” ✧

## How It Works

Systematic problem solving consists of a four-step problem-solving process: situational review, problem analysis, solution generation and plan formulation.

### Step 1: Situational Review

In this first step, complex problems are separated into concrete and manageable pieces. Once that’s done, each separate issue can then be treated discretely and in a more focused manner.

### Step 2: Problem Analysis

The next step is to identify the cause or causes of each individual problem. During this step, the user of systematic problem solving asks a series of straightforward probes to gather all relevant information. This process helps teams and individuals to cut through much of the smoke and uncover the true facts about the causes of the problem.

### Step 3: Solution Generation

During the third step, a variety of probable solutions are generated. The benefits as well as potential risks of each candidate solution are defined and explored in detail. Before a final solution is chosen, specific strategies are identified that will minimize or eliminate the negative side effects while maintaining the benefits.

### Step 4: Plan Formulation

As a final step, a comprehensive plan to implement the solution is developed. During this planning process, all potential problems and risks in the implementation are explored. Based on these potential risks, preventive and contingent actions are identified.

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