Can These Best Practices Make the Club Effective Once Again?

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This paper takes an honest, fresh look at the Club of Rome from an entirely new perspective. The basic approach is to rate the Club on the four best practices common to all difficult problem solving efforts that succeed, using an analysis based on several key strategic planning documents and the author's own work. There are two broad conclusions: One is that the Club of Rome and its National Associations would become much more likely to achieve their objectives if they made the strategic decision to adopt these best practices or their equivalent. The other conclusion is that the analysis is really the first step in a standard five step approach to business improvement. If the Club decides to initiate this self-improvement process, and applies the five steps and the four best practices with passion and analytical rigor, it will become effective once again.

Suppose the Club of Rome wanted to become effective once again. What would be the best approach?

I can think of no better way than to adopt the same key best practices that have worked so well for so many other organizations. "A *best practice* generally refers to the best possible way of doing something; it is commonly used in the fields of business management, software engineering, and medicine, and increasingly in government." [1] From my experience the following practices are always present in all extremely difficult problem solving efforts that succeed:

1. **A true analysis of the problem is performed**. *Analytical* means the use of analysis to solve problems. *Analysis* is breaking a problem down into smaller problems so they can be solved individually. For a difficult problem, this has the effect of taking a giant Gordian knot of incomprehensible complexity and deftly turning it into a collection of much simpler and therefore potentially solvable problems. *In practice this decomposition is so powerful it can transform a problem from insolvable to solvable.*
2. **Use of the Scientific Method to prove all key assumptions.** The SM is the only known method for producing reliable knowledge. Without it you cannot build knowledge upon knowledge reliably, which will cause a complex analysis and solution to collapse before they are even a meter high. This is the same as saying that without the SM you cannot create the large body of sound knowledge necessary for solving a difficult problem. Without the SM you can only consistently solve easy problems.

3. **The use of a formal continuously improved process that fits the problem.** If it is a good fit, then if correctly followed it will lead to solution or to discovery the problem is insolvable. A *process* is a repeatable series of steps to achieve a goal, such as a recipe or Robert's Rules of Order for parliamentary procedure. The process is continuously improved until it is mature enough to solve the problem or determines it is insolvable, as presently defined.
4. **Learning from past mistakes and successes.** As George Santayana wrote in *The Life of Reason* in 1905, "Those who cannot remember the past are condemned to repeat it."

Can adoption of these four best practices guarantee the Club of Rome will become effective once again, and thus succeed in achieving its mission? *Yes, because whenever all four were present and performed correctly in other organizations, success always followed.* I know of no exceptions. Even when an organization's mission turned out to be unachievable, success followed anyhow, because the practices were used to deftly redefine the mission into one that was attainable. [2]

It follows that the prime reason for the Club's ineffectiveness over the last few decades must be due to failure to follow these best practices. Let's perform an assessment of the Club to see how true that is.

Each practice will be rated on a scale of 0 to 100%, to the nearest 10%, with 100% being perfect or world class, and zero being no sign of the practice. The principal sources of data, in chronological order, are *A Future for the Club of Rome* (Khosla and Koerber, November 2004), *7 Steps to Implementation* (COR April 2005), *Reflections on 'A Future for the Club of Rome'* (Dennis Meadows, after April 2005), and *The COR's First 35 Years* (COR late 2005). The first document is a proposal for what to do. The second is the beginning of an implementation plan. The third is a critique of the first. The fourth is a long history of the Club.

Please read what follows with an open mind. This paper is an honest attempt at objective, constructive self-criticism. It is time for the Club to take not just a fresh look at itself, but an entirely different look from a new angle it may not have considered before.

Best Practice 1: A true analysis of the problem is performed

If a true analysis was performed, it should be in *A Future for the Club of Rome*. Much good work has obviously gone into this document, and it shows. It offers many potentially helpful insights.

This document, however, contains no real analysis. Instead it is a long statement of intuitively preferred actions with rationales to support why they should work. For example, the second paragraph boldly declares that *"a new and striking message that shakes up people's conscience could again create a worldwide resonance and incite constructive reaction."* But there is no decomposition of the problem or any

proof supporting this key proposition, which later forms the basis of the proposed solution. There is only a plea that it *should* work. [3]

The solution to how the Club can become effective once again is presented this way, intermingled with an elegant mix of emotionally appealing reasons for why it *should* work, instead of a true analysis:

> "The broader concern under which we propose that the Club of Rome makes *a quantum jump onto a trajectory that brings it back to its former position of preeminence* is the Ethics of Human Solidarity. This overarching concern places primary emphasis on the role of people, and on the need for global solidarity. It is, in fact, simply a broader statement of the original focal concern of 'Limits': the moral platform that enables humanity to choose between narrowly-defined, selfish, competitive-market profits on the one side, and the mutuality and cooperative endeavor needed to live together on a finite planet on the other. Indeed, it simply tantamounts to 'Limits to Material Growth and No Limits to Ethical Development'.
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> "For the Club of Rome to maintain its standing, *the issues it deals with must transcend* the simplistic socio-political problems that occur in the usual shopping lists of problems that organizations come up with. *By bringing such issues within the concept of 'Ethics of Human Solidarity' and tying them to the metaphor of 'Limits', the Club uses its USP to maximum advantage* and also further builds its positioning in the marketplace of ideas as an entity that adds significant gravitas to the issues it deals with. The 'Limits' metaphor is a fundamental element in the 'brand identification' of the Club of Rome. However, it should not be seen as a dogma that restricts the Club to propagating messages of 'doom' – the Club of Rome's uniqueness lies in formulating positive solutions and paths of hope that can evoke worldwide debate and lead to corrective action."

This is intellectual conjecture rather than a well reasoned, analytically sound argument. Simply saying that "the issues it deals with must transcend" is not a form of analyzing why A will cause B. It is only an emotional plea that A *should* cause B. Saying "By bringing such issues within the concept of … the Club uses its USP to maximum advantage" glosses over any analysis and proof of why that is going to work. It only argues that it *should*. If you read the above two paragraphs closely several times, you will see they are no more than a naïve, emotional plea to try this solution because it makes intuitive sense. It has no more chance of working than any other similar exhortation for "a quantum jump into a trajectory that brings [the Club] back to its former position of preeminence."

A true analysis would employ a structured examination that has discovered the fundamental flaws causing the Club's lack of success in the last few decades. After discovery of those flaws, there would be an exhaustive examination of the many possible solution alternatives to correct those flaws. But there is no hint of this approach in *A Future for the Club of Rome*.

Morgan Jones, in The Thinker's Toolkit: 14 Powerful Techniques for Problem Solving, describes this common pitfall: [4]

> "As a result [of taking an instinctive, intuitive approach] we unwittingly, repeatedly, habitually commit a variety of analytic sins. For example:
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> "We commonly begin our analysis of a problem by formulating our conclusions; we thus start at what should be the end of the analytic process.
>
> "Our analysis usually focuses on the solution we intuitively favor; we therefore give inadequate attention to alternative solutions. Failure to consider alternatives fully is the most common cause of flawed or incomplete analysis.
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> "Not surprisingly, the solution we intuitively favor is, more often than not, the first one that seems satisfactory. Economists call this phenomenon satisficing (a merging of satisfy and suffice). Herbert Simon coined the neologism in 1955, referring to the observation that managers most of the time settle for a satisfactory solution that suffices for the time being rather than pursue the optimum solution that a 'rational model' would likely yield.
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> "Most people are functionally illiterate when it comes to structuring their problems. When asked how they structured their analysis of a particular problem, most haven't the vaguest notion what the questioner is talking about. The word structuring is simply not a part of their analytic vocabulary."

A Future for the Club of Rome is chock full of these "analytic sins:" – The Club intuitively favors doing the same thing over and over, in hopes that it will produce another *Limits to Growth*. Page 9 states "The activities by which the Club of Rome takes its work at the global level forward should, broadly, remain the same as in the past." This is satisficing without realizing it. – The paper opens with its foregone conclusion that "a new and striking message" will solve the problem, if the Club can just find it. Thus it starts "at what should be the end of the analytic process." – The paper makes no listing of the alternative solutions that were considered. Instead the paper makes a big point of listing how many people input to the paper, thus confusing examination of alternatives with consideration of suggestions. 34 names were listed. But where is the list of the other alternatives that were considered, with a summary of why they were rejected? – The paper presents its conclusions with not even a hint that a structured analysis was performed.

A true analysis of the problem would use a formal highly structured approach. The Club is currently using just the opposite: an intuitive unstructured approach. Here's what Morgan Jones has to say about the difference between the two:

> "In the *instinctive approach* the mind generally remains closed to alternatives, favoring instead the first satisfactory decision or solution. Consequently, the outcome is frequently flawed or at least less effective than would be the case with the structured approach.
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> "In the *structured approach* the mind remains open, enabling one to examine each element of the decision or problem separately, systematically,

and sufficiently, ensuring that all alternatives are considered. The outcome is almost always more comprehensive and more effective than with the instinctive approach."

Here's an example of how the instinctive approach has caused the Club to remain closed to alternatives. This is from *The COR's First 35 Years*:

> "As a logical extension of the Salzburg meeting, Peccei asked Jan Tinbergen to produce a followup report on global food and development policies... The basic thesis was that the gap between rich and poor countries (with the wealthiest roughly 13 times richer than the poorest) was intolerable and the situation was inherently unstable. What would be required to reduce the gap to 6:1 over 15 to 30 years? …The main Report argued that people in the rich countries would have to change their patterns of consumption and accept lower profits, *but a dissenting group saw consumption as a symptom rather than a cause of the problems, which stemmed rather from the fundamental power structure."*

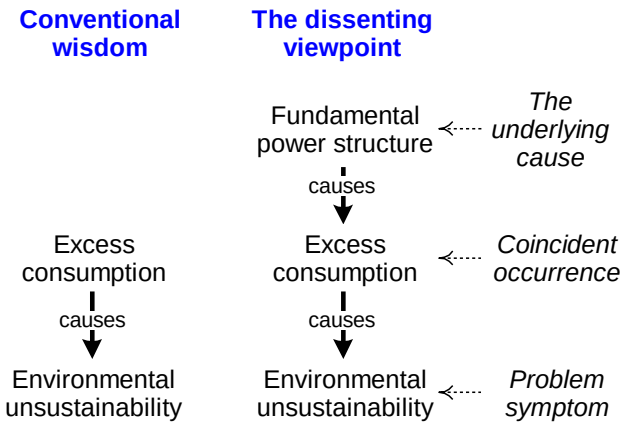
This is not dissension. It is a promising alternative that needs to be thoroughly explored. [5] Calling this dissension shows how the Club's mind was, as Jones describes it, "closed to alternatives, favoring instead the first satisfactory decision or solution."

There is another reason the Club chose the solution they did. Because no real analysis was used, they fell back on common sense and their own experience to pick a solution. The founder of the field of system dynamics, Jay Forrester of MIT, has this to say about that trap:

> "Social systems are inherently insensitive to most policy changes that people select in an effort to alter behavior. In fact, a *social system draws attention to the very points at which an attempt to intervene will fail.* Human experience, which has been developed from contact with simple systems, leads us to look close to the symptoms of trouble for a cause. But when we look, we are misled because the social system presents us with an apparent cause that is plausible according to the lessons we have learned from simple systems, although *this apparent cause is usually a* ***coincident occurrence*** that, like the trouble symptom itself, is being produced by the feedback loop dynamics of a larger system." [6]

Thus the so called "dissenting group" rightly saw consumption as a coincident occurrence rather than a cause. They wanted to explore the fundamental power structure involved, and see if that was causing excess consumption. If it was, then the Club should focus on resolving the problems in the power structure, not on telling the world over and over that it must reduce consumption or pay the price. But because most Club members were following an instinctive problem solving approach, they refused to see things any other way, and so rejected what could have become a valid analysis, followed by a viable solution.

To make these two opposing viewpoints crystal clear, please see the diagram. Conventional wisdom was thinking in terms of excess consumption causes environmental unsustainability. This is true, so it has great appeal. It seems like a sufficient analysis. But there is a deeper truth that only the so called dissenting group saw: Only the addition of the underlying cause of the coincident occurrence gives a correct analysis.



Based on *A Future for the Club of Rome*, the history paper, and other readings, it would be safe to say that the Club deserves a very low rating on best practice 1: A true analysis of the problem is performed. Since it at least tried to consider a few options and ran the *A Future for the Club of Rome* paper through rounds of improvement, let's give the Club a 10% instead of a zero. This may sound unfairly low, but it is time for the Club to engage in some long overdue honest self-examination. Once you have seen a good analysis of a previously misunderstood problem, you will realize that it is entirely possible to do much better. [7]

Best Practice 2: Use of the Scientific Method to prove all key assumptions

The most glaring problem with *A Future for the Club of Rome* and the Club's history is the persistent pattern of deciding what to do with no real proof it will work. While you can rarely 100% prove a solution to a problem will work in the large, you can usually prove that it is more likely to work than other solutions.

Nowhere in *A Future for the Club of Rome* is there any discussion of experimental proof that "the Ethics of Human Solidarity" is going to work. Simply saying that "This overarching concern places primary emphasis on the role of people, and on the need for global solidarity." and "It is... the moral platform that enables humanity to choose between narrowly-defined, selfish, competitive-market profits on the one side, and the mutuality and cooperative endeavor needed to live together on a finite planet on the other." is not going to make it work. All this paper is doing is saying this solution will work because it *should*.

As another example, Dennis Meadows, in his review of *A Future for the Club of Rome*, argues:

> "The proposal by Khosla and Körber ignores the essential roles of money and intellectual brilliance. You get the impression from their proposal that slight changes in meeting schedules by the current members [will cause the COR to] suddenly generate ideas that galvanize the world. *They offer no evidence to support this idea, and indeed, I do not think there is any such evidence.*"

Without evidence that something will work, you can only guess whether it will. How many guesses does *7 Steps to Implementation* take? Seven big ones. As far as I know, none are supported by experimental proof or even a comparative analysis of how they have worked for similar organizations with similar missions. Indeed the words test, proof, hypotheses, alternative, and experiment never appear in the document, nor its predecessor *A Future for the Club of Rome,* even once.

The Scientific Method

1. Observe a phenomenon that has no good explanation.
2. Formulate a hypothesis.
3. Design an experiment(s) to test the hypothesis.
4. Perform the experiment(s).
5. Accept, reject, or modify the hypothesis.

Certainly many of the Club's reports employ the Scientific Method. But the Club's overall approach to achieving its mission does not. *Thus there is no fundamentally correct stream of decisions driving what its reports and other activities should be.* The inevitable result is that each report is an educated guess at what it should focus on. If that hypothesis is wrong, as it appears to have been except for the first report, then even the most brilliant and heroic work on the report has only a low probability of making a major contribution to the Club's mission. Whether a report uses the Scientific Method becomes irrelevant.

Thus the Club scores a zero on best practice 2: Use of the Scientific Method to prove all key assumptions. This is ironic, given that *A Future for the Club of Rome* says "[The Club's] work is based on scientific methods" and "Talk about worldwide issues… is meaningless unless it comes with *credible prescriptions for solutions*."

The Club's Strategic Role

Let's address a related issue here. The Club seems to be a little undecided on what its strategic role should be. The above quote says that talk alone is meaningless unless it comes with credible solutions. But the very next page of *A Future for the Club of Rome* contains this statement:

> "The mission of the Club of Rome is to make unique contributions to the future welfare of humanity. The role of the Club, as stated in 1971, was: "…as that of a *catalyst*. It realizes that its program can succeed only if its achievements are sufficiently new and important and that it attracts a lasting group of adherents from different cultures and various branches of scientific and political activities. To do that the Club seeks to identify a new class of social problems and to *provide the language, the methodologies and the criteria of success appropriate for their solution."*

Which should the Club's role be, credible solutions or catalyst? And what does "provide the language, the methodologies, and the criteria of success appropriate for their solution" mean? I can't be sure. It seems to say that if the Club gropes around long enough with language, methodologies, and criteria long enough, solutions will

somehow emerge. They haven't, for over 30 years now, despite much well intentioned and brilliant effort.

Dennis Meadows has this to say about the matter:

> "The paper by Khosla and von Körber implies that the COR once had a monopoly on 'the most effective ways to deal with (global problems).' This is not accurate. It did once have an important role as a neutral forum where leading intellectuals could meet to inform themselves about long-term problems. But the COR never was able to agree on prescriptive solutions. A large fraction of the COR even strongly disagreed with the analysis in LTG.
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> "Indeed the phrase, 'Report to the COR' was adopted rather than 'Report of the COR' precisely because the Club could not agree on any recommendation. And in any event, most of its publications, including LTG, have been very academic - they have diagnosed issues, but not pretended to offer any specific policy recommendations.
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> *"Give up the idea that the COR exists to design solutions*. When it was eminent, it was a forum for educating its members, giving them the chance to discuss important problems, with high intellectual standards, in a politically neutral forum. Whenever the Club has tried to agree on specific recommendations, it has been stalemated."

What we have here can be called religious debates or endless arguments. These occur when two or more parties strongly feel they are right and their differences boil down to arbitrary premises. Steve Krug, writing in the best seller *Don't Make Me Think*, offers a way out of this common dilemma: [8]

> "Left to their own devices, web development teams aren't notoriously successful at making decisions about usability questions. Most teams end up spending lots of precious time rehashing the same issues over and over.
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> "I usually call these endless discussions 'religious debates,' because they have a lot in common with most discussion of religion and politics: They consist largely of people expressing strongly held personal beliefs about things that can't be proven—supposedly in the interest of agreeing on the best way to do something important. And like most religious debates, they rarely result in anyone involved changing his or her point of view.
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> "The antidote for religious debates [is this:] It's not productive to ask questions like 'Do most people like pulldown menus?' The right kind of question to ask is 'Does *this* pulldown, with *these* items and *this* wording in *this* context on *this* page create a good experience for most people who are likely to use *this* site?'
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> "And there's really only one way to answer that kind of question: testing. You have to use the collective skill, experience, creativity, and common sense of the team to build some version of the thing (even a crude version), then watch ordinary people carefully as they try to figure out what it is and how to use it.

"There's no substitute for it.

"Where debates about what people like waste time and drain the team's energy, *testing tends to defuse arguments and break impasses by moving the discussion away from the realm of what's right or wrong and into the realm of what works or doesn't work.*"

Testing is experimentation. Left to their own devices, Club members have too often been unable to agree on recommendations because there is no climate of breathing, eating, and sleeping the Scientific Method *at the mission strategy level*. In that climate experimentation is the norm for all key assumptions. As soon as a new major assumption appears, the group starts thinking about how it can be tested. And if it cannot, then it is an unproven hypothesis and is not worth raising anyone's blood pressure over, because it's not even worth recommending as a solution. It's as simple as that. Gone are the religious debates and endless, unproductive arguments.

If the Club moved into this climate, gone too would be the question of whether the Club exists to design solutions or not. That itself is a question that can be settled by true analysis and experimentation. If the Club does choose to make firm recommendations, then because all its major conclusions will now be backed by solid experimental proof, there should be little quibbling about whether a solution is "right or wrong."

For lack of experiment, no agreement could be reached. Because of no agreement, no recommendation could be made. Because they had received no recommendation, the government didn't know what to do. Because it didn't know what to do, it did nothing. Because it did nothing its biggest problem, environmental sustainability, remained unsolved. And because of that, the next generation faced the beginning of catastrophic collapse of all they had known. And it was all because of lack of one simple thing: experimentation.

Best Practice 3: The use of a formal continuously improved process that fits the problem

A Future for the Club of Rome does say "a renewed mandate and a rejuvenated *process* would yield something the world rather urgently needs." So there is some awareness of the importance of process. But when we look for evidence that the Club is following a formal process, there is none. There is only an informal one that varies greatly over the years. It is not written down. People are not trained in it. Planning documents such as *A Future for the Club of Rome* do not center on communicating the results of a formal process. If they did we would see the process prominently mentioned, what its main steps had found, what the status of the process was, etc. If the Club followed this best practice, convincing members that a proposed plan for the Club's future should work would involve explaining how the process used had covered critical steps like a failure analysis, examination of alternatives, experimental testing of the leading alternatives, and so on.

If an organization's overall problem solving process is not formalized, it cannot be easily continuously improved. All (well, almost all) organizational processes start

out immature. They are continuously improved over the years, as organizations adapt to the world around them and figure out how to achieve their missions. *Organization maturity is really process maturity*. Thus when you look at an organization that is having repeated trouble achieving its goals, either its process is inadequate or its goals are impossible to achieve. [9]

A Future for the Club of Rome makes a valiant attempt at the right process with the section on *The Processes Needed*. This says "The activities by which the Club of Rome takes its work at the global level forward should, broadly, remain the same as in the past: Annual meeting, special conferences, media events, publication of reports, publication of occasional special statements, and projects by members or in collaboration with other organizations." However, this is not a problem solving process. It is merely the things that the Club would like to do as part of routine operations. Where is the problem solving process itself, the one that defines the mission level problem to be solved, performs an analysis and necessary experiments, converges on a solution, and then evolves that solution as it is implemented? Where is the process function in the organization? Where are the process managers, at the international and national levels?

The Club has fallen into another one Morgan Jones' analytic sins, which he describes this way:

> "We tend to confuse 'discussing/thinking hard' about a problem with 'analyzing' it, when in fact the two activities are not at all the same. Discussing and thinking hard can be like pedaling an exercise bike: they expend lots of energy and sweat but go nowhere.
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> "Like the traveler who is so distracted by the surroundings that he loses his way, we focus on the substance (evidence, arguments, and conclusions) and not on the process of our analysis. We aren't interested in the process and don't really understand it."

From this perspective, what *A Future for the Club of Rome* is really proposing is lots more "discussing/thinking hard about a problem," in the form of meetings, conferences, reports, newsletters, etc. But there is no real process for determining the correct strategies and the most advantageous opportunities to drive those activities. Thus the Club has been expending "lots of energy and sweat" on attempts to reinvent itself, but has gotten nowhere. There is no conception within the Club of a formal continuously improved process that fits the problem, so there is no practice of one. The Club scores another zero on this best practice.

Once again this is ironic, because *A Future for the Club of Rome* says "The mission of the Club of Rome is to make unique contributions to the future welfare of humanity. ... To do that the Club seeks to identify a new class of social problems and *to provide the language, the methodologies and the criteria of success appropriate for their solution.*"

Process Efficiency x Effort = Results, so the better the process the less the effort required to solve the problem. If an organization has a limited amount of effort

it can apply to a difficult problem, then a highly efficient process is mandatory. A good process leverages an organization's strength. [10]

Best Practice 4: Learning from past mistakes and successes

If you do not learn from your own experience, you will make the same mistakes over and over. It appears the Club has fallen into this trap and doesn't even know it.

Once you start thinking in terms of process, you will see that all problem solving efforts have these three main steps:

1. Identify the problem to be solved.
2. Develop a solution somehow.
3. Implement the solution.

The Club has learned the wrong lesson from the extraordinary success of *Limits to Growth*. All LTG did was step one of the above meta-process. LTG identified the sustainability problem, a problem so huge and threatening that it grabbed the world's attention in a heartbeat. *But once a problem is sufficiently identified, it does not need to be identified again or identified any better*. Instead, problem solvers should move on to the second meta-step, develop a solution. Particularly for large difficult problems, the second step requires a totally different process from the first step. But what is the Club doing? It is desperately trying to continue the process that worked so well for identifying the problem, by more reports, more models, and so on that call the world's attention to the problem and its many symptoms. Thus whenever the Club invokes the memory of LTG, as it so frequently does, what the Club is really doing is recommitting itself to the same process LTG used, with the blind hope it will achieve the same success. Dennis Meadows, in his review of *A Future for the Club of Rome*, saw the same trap:

> "The report is preoccupied with the once-in-a-lifetime phenomenon of *Limits to Growth*. Such a book will never happen again. It should not be the basis for a strategy for future development of the Club of Rome."

One of the right lessons to be learned from the success of LTG is that the right process, the right tools, and the right sharp people can solve difficult problems in record time. What would the right process be? Not one that is tuned to *identifying* problems, but one that is designed to *solve* problems of the type that was identified.

This is a complex social system problem. But the Club is treating it as if it was a technical problem that had no serious dynamic social complexity beyond what LTG discovered, even though *A Future for the Club of Rome* says "The unique strength of the Club of Rome lies in its *systems approach*."

If the Club was truly following a systems approach, and was focused on solving the problem instead of identifying the problem better or identifying more of its symptoms, it would make the following discovery: *the social side is the crux of the problem*.

This insight is so different from the Club's (and the world's) present mindset that it is a new paradigm. Most people find it impossible to accept major new paradigms in less than half a lifetime. But if you have an open mind, and do not feel limited by conventional wisdom, please read on.

The transformation of society to environmental sustainability requires three steps: The first is the profound realization we must make the change, because if we don't then the collapse of civilization due to environmental overshoot will be unavoidable. The second is finding the proper practices that will allow living sustainably. The third step is adopting those practices.

Society has faltered on the third step. By now the world is aware it must live sustainably, which is the first step. There are countless practical, proven ways to do this, which is the *technical side* of the problem and the second step. But for various subtle reasons society doesn't want to take the final step and adopt these practices, which is the change resistance or *social side* of the problem. *Therefore the social side is the crux of the problem.* [11]

The System Improvement Process

If the Club had been using a process designed for solving this type of problem, the process would include solving the social side of the problem. For example, the Club could use the System Improvement Process. [12] This is a very general process designed for solving complex social system problems.

The process decomposes one large problem into three smaller, distinctly different problems, each of which is much easier to solve. For a difficult complex system problem, this has the effect of taking a giant Gordian knot of incomprehensible complexity and deftly turning it into three much simpler and therefore potentially solvable problems. *In practice this decomposition is so powerful it can transform a problem from insolvable to solvable.*

The System Improvement Process works its analytical magic by decomposing a problem into these carefully engineered subproblems:

1. Change resistance

2. Movement to the goal state

3. Staying in the goal state

The subproblems are interrelated. The first must be overcome so that the solution to the second can be implemented. The third must be solved to prevent overall problem recurrence. All three must be solved to solve the overall problem.

The *goal state* of the system occurs when problem symptoms are reduced to acceptable levels. If the system is in the goal state or is moving there by a predetermined deadline with a sufficiently high probability, the problem is considered solved.

Here are the steps of the System Improvement Process:

1. **Problem Definition** – What is the problem? This is defined in terms of the goal state versus the present state of the system with the problem.

2. **System Understanding** – Why are the three subproblems occurring?
   2.1 Why is there such strong change resistance?
   2.2 Assuming 2.1 is solved, why is the system not automatically moving to the goal state?
   2.3 Assuming 2.2 is solved, why is the system not staying in the goal state?

3. **Solution Convergence** – How can the three subproblems be solved?
   3.1 How can change resistance be overcome?
   3.2 Once 3.1 is solved, how can we move the system to the goal state?
   3.3 Once 3.2 is solved, how can we keep the system in the goal state?

4. **Implementation** – Once solutions to the three subproblems are found, the three subproblems are solved by these three sequential substeps:
   4.1 Overcome change resistance to adopting the solution.
   4.2 Move from the present state to the goal state.
   4.3 Stay in the goal state indefinitely.

The first step is Problem Definition. The second step is System Understanding. It is where problem solvers should spend about 80% of their time. *If the all important second step is done well, problem solvers (and anyone else, including decision makers) will understand the system with the problem so deeply and correctly that the third step, Solution Convergence, is almost trivial.* Problem solvers will understand the dynamic structure of the system so completely that they can predict, within a broad range, how it will respond when low, medium, and high leverage points are pushed on. Solution Convergence then becomes a simple matter of selecting a reasonably straightforward way to push on the high leverage points. Because the correct points will be used, almost any form of pushing on them will do. *A seemingly trivial solution is the payoff for using the right problem solving process*.

In problem solving jargon, the System Improvement Process provides an extremely efficient means of "searching" a large and unknown "solution space" for a solution that will work. The reduction of millions of possible solutions to one or more that will actually work is known as Solution Convergence, which must be preceded by System Understanding so that convergence happens quickly and correctly.

Limits to Growth performed the first step by identifying the problem. And then, because it had no real process, the Club dashed right into implementing lots of solutions that intuitively looked like they would work. They did not, except on easy problems where change resistance was small. When it is large, as it is for problems like climate change, only a process which accommodates change resistance will work. The System Improvement handles this with steps 2.1, 3.1, and 4.1.

It is my hypothesis that if the Club adopted a process tailored for solving this type of problem, it would increase its chances of helping to solve it by over an order of magnitude.

But this is not in the present paradigm of the Club. For example, the *7 Steps to Implementation* requires a "proposed report," which I assume would include this paper, to "comply with all points of the following checklist in order to be accepted." The very first item on the list is "The planned report falls within the overall theme of ethics of human solidarity." But a formal process has nothing to do with ethics, unless you say that yes it does, because it will indirectly improve planetary responsibility ethics. In that case, everything the Club could possibly want to do would fall under ethics, thus making it an irrelevant criterion.

Or you might say that process is an internal matter and should not be a report. But in the *7 Steps to Implementation*, there are only 7 ways felt as "crucial to raise the Club's overall performance." These are membership, national associations and tt30, finance, contents [reports], organization of the annual conferences, other outputs, and PR and media. None of these comes anywhere close to the abstraction of a formal overall process that drives the entire Club's behavior. Thus there is nowhere in the Club's present paradigm to put a formal process. To do that, we must take a long, hard look at ourselves and replace the present paradigm with a new one centered on a formal problem solving process.

The Club can learn several important lessons from *Limits to Growth*:

1. As Dennis said, another LTG is never going to happen, so the Club should abandon similar strategies.
2. LTG did not succeed for the 10 reasons listed in *A Future for the Club of Rome*. These are minor reasons. The principal reason is LTG discovered a new problem whose importance to *Homo sapiens* went off the chart.
3. The Club should realize that at the highest level of abstraction, it is now in meta-step two, develop a solution somehow.
4. The social side is the crux of the problem. That is where the Club can be most effective.
5. But the Club can only be effective there if it follows a process tailored to the problem, which is so important it is best practice number 3.

The Club has learned much from experience. But it has not learned what I feel are the five above important lessons. Thus it gets a rating of only 30% on best practice 4: Learning from past mistakes and successes.

Comparing the Club to Other Organizations

Below is a table listing the Club's ratings on these best practices, along with other organizations that we can learn from. A column has been left blank for you to rate your own organization. The numbers are rough estimates, but are good enough for comparative purposes. American organizations have been selected because I live in the US and am more familiar with them.

Comparative Best Practice Ratings

Best Practice	Club of Rome	Limits to Growth Project	NASA	The Heritage Foundation	The Nature Conservancy	Your Organization
1. A true analysis of the problem is performed.	10%	100%	100%	70%	80%	
2. Use of the Scientific Method to prove all key assumptions.	0%	90%	90%	100%	80%	
3. The use of a formal continuously improved process that fits the problem.	0%	80%	100%	90%	100%	
4. Learning from past mistakes and successes.	30%	?	90%	100%	90%	
Average Rating	10%	90%	95%	90%	87.5%	

The Limits to Growth Project – If the *Limits to Growth* project is viewed as a temporary organization, it can be rated with the same best practices we have just rated the Club on. There is no question a full true analysis of the problem was performed, so LTG gets a perfect 100% rating here. The problem LTG was solving was how to prove to the world that the global environmental sustainability problem existed, starting with the World2 model that Jay Forrester provided the team with. Using the new tool of system dynamics, the problem was broken down into smaller problems by the use of subsystems. Each subsystem was then expanded into a model sufficient to explain the problem that subsystem was facing: Why did its stock(s) behave the way it did? By also modeling the interrelationships between the subsystems, system behavior as a whole was modeled. The result was a model and scenarios that could easily be communicated via an extraordinarily well written book. The book then convinced the world the sustainability problem existed and must be dealt with proactively if humanity was to avoid eventual catastrophe.

Study of LTG's technical companion, *Dynamics of Growth in a Finite World*, shows that the team rarely guessed at anything. They measured it or logically concluded values and relationships for which there was uncertainty. They then performed thousands of experiments to test their hypotheses by running the model or subsystem models over and over, until system behavior both agreed with the real world and followed from the structure and parameters of the model. But by necessity there were a few educated guesses, due to diminishing returns and time constraints. Thus instead of a perfect 100% for best practice 2: Use of the Scientific Method to prove all key assumptions, they get only a 90%. But this is still outstanding, compared to the Club's rating of 0% for this practice.

How did LTG do on best practice 3: The use of a formal continuously improved process that fits the problem? This may be seen in chapter 1 of *Dynamics of Growth*, which is titled *The Philosophy and Assumptions of World3*. The team took the time to take a world class approach, especially when you realize they were pioneering the application of a fairly new tool to a brand new problem. The chapter starts out with *Alternative World Models*, so at the highest level they considered all major alternatives. The chapter goes on to *Steps in the Modeling Process* and lists the 9 steps of the formal process the team used. Finally, the end of the chapter lists "our criteria for judging the usefulness of the model." These are the tests to prove all key assumptions. They are not perfect tests, as the chapter acknowledges. But they are good enough to support the team's mission. I was unable to determine from the book if continuous improvement of the process occurred, but from my experience in modeling, which usually requires many iterations of improvement, and the reputation of MIT, I will assume continuous improvement was strongly present. The LTG project gets an 80% on this practice. Too low you say? Well, my guess is that by the time the team wrapped up their project, they had learned a bunch. If they had then started another similar project, they would have taken all they had learned to improve the process still more. It is a little much to expect a team to achieve process perfection on its first project. That generally takes three tries or more.

Finally, how did LTG do in best practice 4: Learning from past mistakes and successes? I cannot determine this from the LTG or *Dynamic of Growth* books. So, until further data is available on this, it is left as unknown. But I suspect it was high.

This gives an average rating of 90% for LTG. The Club received a 10% average rating. While these numbers are not exact, they do clearly show that the Club's rating started out high on its first project and then went low on all the rest. The first project was high in effectiveness, while all the rest were low. If you feel, as I do, that this is because there is a strong correlation between these best practices and an organization's work outcome, then please join me in making a firm recommendation: *the Club's top priority project should become adopting these best practices, or their equivalent, and getting a rating high enough to achieve its mission.*

NASA – Next we rate NASA. If anyone is world class in achieving difficult missions it should be NASA. But even NASA is human, so it too has room for improvement.

NASA gets a 100% for the first practice: A true analysis of the problem is performed. They exhaustively analyze how to achieve objectives. Innumerable alternatives are explored and explored again when necessary. They are so good at this that they have set the standard.

The same holds for the second practice: Use of the Scientific Method to prove all key assumptions. They would also get a 100% here, except for what appears to be bureaucratic issues that have caused occasional decision errors. The most infamous was the fatal decision to launch the Challenger mission when air temperatures at the launch pad in Cape Kennedy, Florida were unusually low. Too low, as it turned out. The hypothesis that it was okay to launch was not based on sufficiently sound evidence, and so the mission failed 73 seconds after liftoff, due to O-ring failure caused

by inability of O-ring material to accommodate the cold launch temperatures. [13] So let's give them just a 90% here.

Now for the third practice: The use of a formal continuously improved process that fits the problem. I worked for NASA for 12 months at Cape Kennedy in Florida during the late 1960's, just before they landed the first man on the moon. 35,000 people worked there at the time. What I saw was a formal continuously improved process so well done as to boggle the mind. One of my jobs was to peruse ground support hardware modification document packages for process errors. Our department's task was to coordinate tracking of an average of 10,000 change modifications to ground support hardware in progress at any time. My department manager, Ron McCullar, just before I arrived had wrestled those 10,000 changes into a single system that tracked them perfectly, thus preventing anything from falling through the cracks and jeopardizing schedules and lives. We had a Change Tracking Center room that, on chalk boards at the time and later on computer screens, listed the top critical changes and their status. Anyone could see at a glance how well things were going. My memories of a world class process come alive were so vivid that I am still learning from the experience. So, without further ado, let's give NASA a perfect 100% here.

The fourth best practice is learning from past mistakes and successes. NASA has post mortems on everything. Grilled into everyone, and written into their many processes, is the commitment to learning from the past. However, there are some recurring shortcomings here, as shown by the Apollo 1 fire in 1967, where 3 astronauts died on the ground in seconds when the oxygen-rich air in the capsule ignited, the Challenger disaster in 1986, and the 2003 loss of the Columbia during re-entry. NASA has performed exhaustive post mortems on all of these events, to prevent recurrence. But have they improved their overall process to keep future mission failures at a minimum? I doubt it, judging by the string of failures. Thus NASA gets only a 90% for this practice.

NASA's average rating is 95%. There is no reason why the Club cannot achieve the same rating eventually, and thus the same incredible results. After all, all it takes for world class results is high ratings in the four best practices.

Some would argue that no, that can't be done. NASA had all the funding it needed, while the Club has no more than a shoestring because it is a volunteer organization. To this I would reply: *That is part of the problem to be solved.*

Most environmental NGOs suffer from a perpetual funding crisis. But there are ways to solve this constraint. For a world class example, see the Nature Conservancy later in this paper. In 2005 they had revenues of over 600 million dollars, using a novel income generating scheme integrated with mission achievement.

This is stark proof it can be done. There is no reason the Club cannot emulate the Nature Conversancy's innovation and achieve the high rating they have. What is stopping the Club from becoming an organization that helps to manage the stewardship of the Earth in a manner that generates substantial income? *Only the Club's*

reluctance to abandon its present operational paradigm and replace it with an entirely new one, which it can find by adopting the best practices.

The Heritage Foundation – Some have called the Club a futurist organization. Others have called it a think tank, which I feel is closer to the mark. The Club's home page even states that "The Club of Rome is *a global think tank* and centre of innovation and initiative. So let's examine what think tanks are, how good a think tank the Heritage Foundation is, and then consider how the Club might be able to become a much more effective think tank and possibly a hybrid organization.

Wikipedia.org defines a think tank as "*A research institute or other organization providing advice and ideas on problems of policy, commerce, and military interest."* The American Heritage dictionary defines a think tank as "*A group or an institution organized for intensive research and solving of problems, especially in the areas of technology, social or political strategy, or armament."* [14] Given all the research the Club has been doing, the high percentage of its members who are scholars, its research reports, and the way the Club tries to influence national and international policies through talk and those reports, the Club is a think tank more than anything else. Therefore the Club needs to deeply understand how they work so it can become a best in class think tank.

Think tanks were born in the United States in the early 20th century. In 1971 the growth of US think tanks exploded, due to publication of the Powell Memo. [15] Ideological oriented US think tanks have become so powerful that they have replaced political parties as the most influential type of political organization. Sharon Beder, in *Global Spin: The Corporate Assault on Environmentalism*, 2002, explains why:

> "Think tanks have played a crucial role in building and supporting policy consensus and thereby replaced American political parties which tend to work rather as electoral coalitions than as places of ideological discussion and policy planning."

In 1973 the Heritage Foundation was founded as a non-profit 501(c)(3) US corporation, just like the USACOR, the Nature Conversancy, and many other US NGOs. Here is its stated mission:

> "The Heritage Foundation is a research and educational institute—a think tank—whose mission is to formulate and promote conservative public policies based on the principles of free enterprise, limited government, individual freedom, traditional American values, and a strong national defense." [16]

The Heritage Foundation is widely considered to be the most influential of all US think tanks. Sharon Beder explains why:

> "The Heritage Foundation has often been credited with changing the face of think tanks with its aggressive marketing strategies; others are now following suit. The foundation spends only 46% of its budget on actual research: more than half goes on marketing and fund raising, including 36% on

public relations and 'educational programs.' Foundation president Ed Feulner says: 'We view production—that is, conducting research, analyzing the data, and publishing the finding—as only part of the total process. The other key part is marketing—the way in which we package our findings, our distribution network, and the various activities aimed at building support for our ideas.

"The Foundation produces hundreds of publications every year, including books and a quarterly journal, *Policy Review*. Its specialty is its 'backgrounders' or 'bulletins' which are *short essays (between two and twenty pages) on current issues*—'brief enough to read in a limousine ride from National Airport to Capitol Hill.' These are provided without charge to government officials, employee and journalists, *and are usually personally delivered*.

"The Heritage Foundation, like other think tanks, conducts public opinion polls as a means of—as a Foundation employee put it—'*influencing public opinion, not just reflecting it.'* This is done by selecting questions that will influence the results and then getting wide media attention for the supposedly objective poll findings."

There is a lot to be learned from think tanks and the Heritage Foundation in particular. The first lesson is that compared to the Club, the Heritage Foundation is a true analysis fiend. But still, there are a lot of intuitive decisions in its analyses of what will work and what won't, so let's give it just a 70% on best practice 1: A true analysis of the problem is performed.

The Heritage Foundation does better in best practice 2: Use of the Scientific Method to prove all key assumptions. It is constantly experimenting with new techniques to influence political decisions. If something works, it is used more. If it doesn't it's dropped. If it works really well, variations are tried. Impact is measured by how many of its recommendations enter into actual legislation, how many times the Heritage Foundation is cited in the literature, how many time its staff appears on television, and so on. This gives the Heritage Foundation a powerful feedback loop to drive its experimentation to even greater heights of success.

As a result the Heritage Foundation has rapidly evolved into the most sophisticated and effective think tank machine in the world. It is so effective its methods are widely copied by the rest. In other words it is *the* world class standard here. So let's be fair and give them a 100% on this practice. This is interesting, because the staff of Heritage Foundation is not scientists. In fact, most are not even academics. But then again, because of their successful exploitation of the Scientific Method, perhaps they are the *true* scientists of politics in America.

Next we come to best practice 3: The use of a formal continuously improved process that fits the problem. Notice how their president, Ed Feulner, says "We view production—that is, conducting research, analyzing the data, and publishing the finding—as only part of *the total process*. The other key part is marketing—the way in which we package our findings, our distribution network, and the various activi-

ties aimed at building support for our ideas." That is not only process awareness—it is process excellence compared to the rest. But I suspect their process is more driven by their president's personal style and methods, rather than a formal process that is independent of any individual. Thus the Heritage Foundation gets only a 90% for this practice.

The literature shows that the Heritage Foundation has consistently refined its method over the years at a breakneck pace. It appears to have performed best practice 4: Learning from past mistakes and successes, very well. So well, in fact, that once again it is a world class leader in this practice. They score another perfect 100% on this one.

This gives the Heritage Foundation an average best practice rating of 90%. Is there any reason why the Club cannot score as high, using the same methods? No. As far as I can tell, there is nothing stopping the Club from becoming an international think tank that is every bit as effective.

The Nature Conservancy – Let's examine an outstanding example of how all roadblocks are really parts of the problem to be solved. Most environmental NGOs struggle to not just achieve their mission, but to survive. But a few are just the opposite. Through the application of these best practices and general good management they have evolved a solution that is so comprehensive and efficient that their performance is world class. The best example I've found of this is The Nature Conservancy.

Go to nature.org/aboutus/howwework and you will see, on one short page, their mission, their approach, and their methods, tools, and techniques, plus a list of the ways they achieve their mission. *The Club of Rome has nothing like this*. But it could. All it has to do is collectively wake up and say "I am not married to my present way of doing things. There must be a better way." Once the Club says that, then it can begin to learn from the masters, starting with the Nature Conservancy.

This above web page says "The mission of The Nature Conversancy is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive." To do this they "have developed *a strategic, science-based planning process*, called Conservation by Design, which helps us identify the highest-priority places—landscapes and seascapes that, if conserved, promise to ensure biodiversity over the long term." This process considers the severe funding constraints that all activist organizations have, and surmounts them with the innovative device of encouraging land owners to donate or will the Conservancy major chunks of land, plus other devices like easements and debt for nature swaps. This makes them a land trust. As of 2005 the Conservancy had revenues of over 600 million dollars a year and 3.5 billion dollars in assets, and had protected an astounding 117 million acres of land and 5,000 miles of rivers. It employs 3,200 people, 720 of whom are scientists. A fundraising campaign running from 2000 to 2003 raised 1.4 billion dollars.

Rummaging around the Nature Conservancy's website, one quickly notices this is an organization that knows what it's doing. Their history page, at nature.org

/aboutus/history, shows a steady progression of growth in mission accomplishment due to one innovation after another. They have a great organizational learning curve. It probably could be faster, but compared to most of their peers, it is excellent. So let's give them a 90% for best practice 4: Learning from past mistakes and successes.

The key point in their learning curve seems to have occurred in 1955, with the purchase of a 60 acre tract along the Mianus River Gorge in the US. The Conservancy provided $7,500 to finance the purchase, with the provision that the loan be repaid for use in other conservation efforts. The revolving loan fund that resulted—the Land Preservation Fund—is still the organization's foremost conservation tool.

The Club needs to pull out a magnifying glass and scrutinize this key event. *What happened here is the Conservancy discovered a way to preserve land and generate income at the same time.* Over the years the Conservancy continued to refine this mechanism into various "funding for conservation" schemes that today reliably generate around half a billion dollars a year in income.

Why can't the Club do the same, with a slew of novel "funding for sustainability" schemes? To start down that road, all we need to do is find the first novel way, as the Conservancy describes it, to "create market incentives for conservation." No matter how simple and small that first step is, once we find out how to take it, the rest of that road can be just as productive as the one the Conversancy started down in 1955.

The next key event in the history of the Conservancy came 40 years later, in 1995. Steve McCormick, their current President and CEO, tells the story:

> "In the 1990s, advances in large-scale conservation planning and The Nature Conservancy's own five decades of experience led us to create Conservation by Design, a framework through which we set out to fulfill our mission in the face of mounting assaults on the natural world. Our late president John Sawhill challenged a small group of staff to devise a new vision and approach that would help us to be as strategic, effective and efficient as possible in our work to conserve biodiversity. I was privileged to lead the team that developed *Conservation by Design: A Framework for Mission Success*, first printed in 1996 and updated in 2001.
>
> "In the intervening years, Conservation by Design has come to be our touchstone for action. *It tells us where to work, what biodiversity to conserve, what strategies we should use, and how effective we have been.*
>
> "In fact, the Chinese government is basing its new national-level conservation and development plans on Conservation by Design; and in Madagascar, all national parks are going through the 5-S planning process. In the United States, Conservation by Design has been infused into state wildlife management planning in all 50 states, with important ramifications for budgets and places on the landscape."

Conservation by Design instantly became the process driving the Conservancy's core work. As the above passage above explains, "It tells us where to work, what biodiversity to conserve, what strategies we should use, and how effective we have

been." That is exactly what a good process should do. All the Club has to do is substitute the Club's chosen tactics for "what biodiversity to conserve," and we could have our very own Sustainability by Design process summary in a single sentence.

There is absolutely no doubt the Conservancy is world class in best practice 3: The use of a formal continuously improved process that fits the problem, so they get a perfect 100% here. Their core process, Conservation by Design, is so superior that the Chinese government and all 50 state wildlife management agencies in the US have incorporated it into their own processes. The process is so good and so central to the Conservancy's work that a diagram of the process is on many of their web pages, as reproduced here. Clicking on the five areas of the diagram takes you to a page about that step in the process. This clicking is one way to get people to start thinking in terms of process. Notice how the process is a closed loop. "Measuring Success" allows the continuous improvement necessary to turn a static process into a dynamic one that is continually self-improving, using the very strong reinforcing loop shown in the diagram.

Conservation by Design, the core process of The Nature Conservancy.

It is a little harder to determine how well the Conservancy is doing in best practice 2: Use of the Scientific Method to prove all key assumptions. At the scientific level in their projects, I expect this is high. At the project level, I expect it is average, though this is okay because they have such a strong process. At the overall organization level, it's probably low. Normally that would lead to disaster, but because they have a continuously improved process for all their conservation projects, that process seems to pull the entire organization along to greatness. So my first inclination would be to give them a 50% for this best practice. But because they have such a good project process, their mission seldom needs its key assumptions checked any more. It is a stable and fairly optimum mission. So let's up that 50% to 80%.

Finally we come to best practice 1: A true analysis of the problem is performed. The Conversancy has two main types of problems: its overall mission and its conservation projects. A true analysis is routinely performed on the projects. On the mission, I can't tell from examination of their website. But a read of their history page and numerous other pages shows there is a strong informal analysis rather than none at all, so at least it's not zero. An educated estimate is better than none at all here, so I'd score them high on project analysis and low on mission analysis. This would give them a 50% on this practice. But again, because they have such a good project process, their mission seldom needs analysis any more. So if we weight the importance of their project analysis as high and their mission analysis as low, we get much more than a 50%. Let's go with an 80%.

The average rating for The Nature Conservancy is 87.5%. If we had weighted best practice 3, process, higher than the other practices, the Conservancy would get a higher rating. We should probably do that. But for simplicity the rating system is unweighted in this first iteration. Like all practices, it can evolve.

Once again, is there any real reason the Club cannot score this high or even higher? No. There is nothing stopping the Club from becoming an organization that is just as pioneering and effective. But of course, the Club must first decide which fork in the road it wants to take.

* * *

The best road would, I suspect, be a combination of several of the techniques used by the organizations we have rated here. Due to the extreme size, difficulty, and complexity of the global sustainability problem, it would probably require NASA's obsessive devotion to true analysis. And since the Club would probably be pioneering ways to solve the social side of the problem, world class use of the Scientific Method would be required. Judging by how successful The Nature Conversancy has been with its Conservation by Design process, which they label "A Framework for Mission Success," the Club is also going to have to design their own similar process and let it drive the entire Club, just as Conservation by Design drives the Conversancy. Like the Conservancy's, that process will be much more likely to work if it includes an integrated, innovative funding scheme that allows the Club to hire the brilliance and brawn needed to execute its strategy. Finally, the Club must be just as fanatical as the Heritage Foundation in learning from the past.

The final conclusion of this analysis follows easily: The Club's relatively low rating is *the* underlying strategic reason why it has been failing to achieve its mission for decades. *Therefore the Club must score high or world class in all four best practices if it is to have any rational hope of cracking the toughest nut in the world: the complete problematique.*

A Call for Collaboration

If you feel as I do, that something like this is both required and possible, then please join me in a call for collaboration at thwink.org. There you will find a discussion forum set up for this very topic and related ones. Anyone can read the forum messages. To join the forum and thus be able to post messages, please email me with a short description of what you have to offer in this collaborative effort to help the Club, as well as the world, take the right fork in the road.

(NOTE – As of right now, March 31, this forum is not yet open. That will happen soon, after we've got some "starter" discussions going so it doesn't look so empty. If you would like to help start this dialog, please email me. Also, this forum will probably be a temporary bridge to the one the COR is setting up in a few months or so.)

The Five Steps of the Business Improvement Process

Some readers may have noticed that this paper is the first step in a standard approach to business improvement. It is the assessment step, and is often performed by an outside consultant. The second step is presentation and discussion of the assessment. The third step is development of a strategic plan on how to move forward in areas where the assessment found the business weak. *This strategic plan is not the solution to the organization's problems, but a way to get started that will lead to solution.* The fourth step is implementation of the strategic plan, with an ongoing review of how it's going. The fifth and final step occurs after the plan is fully executed or replaced by something else, and centers on the questions of "How did we do?" and "What did we learn?" and "What next?" There are variations on these steps.

The concepts in this paper are so broad they apply to any business whose mission includes solving difficult problems. This includes the Club of Rome and its family of National Associations. Most have similar problem symptoms: too few younger members, falling memberships, lack of successful projects that influenced major government decisions, and perhaps worst of all, loss of many of their very best members. The last can create a downward spiral that is impossible to stop.

These problems may look depressingly difficult to solve. But thousands of other non-profits have had the same problems and have solved them. And if you substitute the word "customer" for "members," millions of for-profit business have had the same problems, and have solved them too. So there must be a path forward.

That path is the five steps outlined above. Take the ideas in this paper and rate your own organization. Don't do it alone in five minutes. Take days or weeks and involve others. Try to end up with a rating that a core group believes in. It will probably be low. And it will probably be lopsided. The best practices that are the lowest are the places to start to improve first. As you perform you own rating, you may decide to add additional practices (or subpractices) and weights. This is exactly what you should do, because it will greatly improve the power of the assessment to pinpoint your unique organization's strengths and weaknesses.

The strategic plan must involve a formal process, a true analysis, testing of key hypotheses, and implementation of candidate solutions that pass muster. The rest is unique to your needs.

Good luck, and see you on the forum. There we can talk about and help each other with specifics, such as our self-assessments, how our strategic plans are developing, how our analyses are going, what we have discovered so far that may help others, and much, much more.

Endnotes

[1] The definition of best practice is from en.wikipedia.org/wiki/Best_practice, which contains a good introduction to the philosophy of best practices. The article begins with:

> "In business management, a best practice is a generally accepted 'best way of doing a thing.' A best practice is formulated after the study of specific business or organizational case studies to determine the most broadly effective and efficient means of organizing a system or performing a function. Best practices are disseminated through academic studies, popular business management books and through 'comparison of notes' between corporations."

[2] What about the many cases where "bad luck" caused an organization or person to fail to achieve its mission? Examples are the catastrophic loss of NASA's Challenger, many otherwise brilliant military campaigns, and having an auto accident on the way to an important meeting.

The proper way to rigorously define a problem solving objective is to use the following format: Move system A under constraints B to goal state C by deadline D with confidence level E. Thus the problem is defined in terms of the acceptable probability of solving it. NASA, for example, does not use a 100% confidence level of achieving its missions. It thinks in terms of maximizing probability of mission success, which is part of the field of reliability engineering. From this perspective, what the Club is really doing is attempting to reengineer the human system so that it is sufficiently reliable in terms of long term sustainability. For more on this subject, please see www.en.wikipedia.org/wiki/Reliability_engineering. This page defines *reliability* as "the probability that a system will perform its intended function during a specified period of time under stated conditions."

[3] Dennis Meadows noticed this problem too. In his review of *A Future for the Club of Rome* he stated "I totally disagree with the next statement, 'a new and striking message that shakes up people's conscience could again create a worldwide resonance and incite constructive reaction.' The world is a very different place than it was in the early 1970s. The circumstances that produced LTG were unique to that time; they will not be repeated. It is sterile for the COR to orient any efforts to rejuvenate itself on a model derived from the phenomenon of LTG. There is not going to be another block buster book on the world problematique."

[4] From *The Thinker's Toolkit: 14 Powerful Techniques for Problem Solving*, by Morgan D. Jones, 1998. One of the techniques is causal flow diagramming, which is only one step away from simulation modeling. Another technique is hypothesis testing. Part one, *Why We Go Astray*, is the best I've seen on the proper mindset required for solving difficult problems.

[5] This alternative is so promising that my own work has come to a similar conclusion: the principal underlying cause of resistance to adopting a solution to the global environmental sustainability problem is a particular "fundamental power structure." This has been modeled as The Dueling Loops of the Political Powerplace at thwink.org/sustain/articles/005/DuelingLoops_Paper.htm.

[6] From *World Dynamics*, by Jay Forrester, 1971, page 95. Professor Jay Forrester of MIT was *the* key person in initiating the *Limits to Growth* project. It was he who invented system dynamics, it was he who offered to apply his modeling skills to the Club's global issues problem, and it was he who rapidly created World1 and then World2, which became the World3 simulation model of the *Limits to Growth* project.

[7] For an example of an excellent analysis, see *Limits to Growth*, of course! Another classic example is *The Economic Consequences of the Peace*, by John Maynard Keynes, 1920. Here are two samples from that analysis:

> "Only by operating this machine, continuously and at full blast, could [Germany] find occupation at home for her increasing population and the means of purchasing their subsistence from abroad. The German machine was like a top which to maintain its equilibrium must spin ever faster and faster.
>
> "He sees the issue in terms, of France and Germany, not of humanity and of European civilization struggling forwards to a new order. ... It happens, however, that it is not only an ideal question that is at issue. My purpose in this book is to show that the Carthaginian Peace is not practically right or possible. Although the school of thought from which it springs is aware of the economic factor, it overlooks, nevertheless, the deeper economic tendencies which are to govern the future. The clock cannot be set back. You cannot restore Central Europe to 1870 without setting up such strains in the European structure and letting loose such human and spiritual forces as, pushing beyond frontiers and races, will overwhelm not only you and your 'guarantees,' but your institutions, and the existing order of your Society."

[8] From *Don't Make Me Think: A Common Sense Approach to Web Usability*, by Steve Krug, 2006, pages 123 to 129.

[9] Regarding "either its process is inadequate or its goals are impossible to achieve:" Sometimes both are true, if due to an inadequate process an organization has failed to discover that it is pursing an impossible goal.

[10] For more on the key role of process efficiency please see the simulation models on The Basic Structure of Process Revolutions and The Memetic Evolution of Solutions to Difficult Problems in the manuscript to *Analytical Activism* at thwink.org.

[11] For a detailed analysis and simulation model exploring the hypothesis that "the social side of the problem is the crux," please see The Dueling Loops of the Political Powerplace at thwink.org/sustain/articles/005/DuelingLoops_Paper.htm.

[12] For more on the System Improvement Process (SIP) please see thwink.org. Take a look at Part One of the manuscript to *Analytical Activism*. The chapter on *Why the Environmental Movement Needs the Right Process* contains a good introduction to SIP. This is a process I developed myself, since there was not an adequate one for this type of problem when I started work on it in 2001.

[13] A brief review of the role of O-rings in the Challenger catastrophe may be seen at www.me.utexas.edu/~me179/topics/lessons/case4articles/case4article8.html.

[14] The first definition of "think tank" is from en.wikipedia.org. The second is from www.thefreedictionary.com.

[15] For a look at how the Powell Memo worked its magic, see an extract from my own work at thwink.org. Click on The Powell Memo.

[16] The mission statement for the Heritage Foundation is from *War of Ideas: Why mainstream and liberal foundations and the think tanks they support are losing in the war of ideas in American politics*, by Andrew Rich, as published in the Stanford Social Innovation Review, Spring of 2005. The article is available at: www.ssireview.com/pdf/2005SP_feature_rich.pdf. This article is an eye opener.