MATTHEW MORAN

BUILDING YOUR
I.T. CAREER

A COMPLETE TOOLKIT
FOR A DYNAMIC CAREER
IN ANY ECONOMY

SECOND EDITION

Concept Over Process

Concept Over Process (COP) is a project development methodology. Much has been written on project management, the monitoring and measurement of the resources and tasks in the project. However, less information is available on the actual analysis and creative process—the process that occurs prior to and during a project's life cycle.

Most project management books include sections on defining the project. They explain the importance of identifying the project scope. The actual thought process involved in the analysis, however, is less readily available.

Throughout my career, I have created a simple, yet powerful method for generating the creative/analytical thought that must occur prior to and during a project. This method has been formalized into COP to provide a starting point for those who perform project work.

What to Expect

COP is largely conceptual in nature. It is the intellectual precursor to a variety of task-oriented processes. Certainly for the technologist, it is a critical step in helping to define tangible solutions.

You can expect (as you adopt a COP mindset and approach) to think differently about your projects. You will find that you become largely agnostic about which technology or process is critical and more focused and interested in the overall business objectives and project impact.

What Not to Expect

COP is *not* project management. Although COP is a component that is often missing from the project management cycle, it does not involve measurement and tracking per se. It is an ancillary skill and tool to ensure that a project is more closely aligned with actual business objectives.

Highly organized and technical individuals often provide project management. However, innovation and solutions are often abstract concepts that require a more creative, almost artistic mindset. Both ideals are critical in creating true solutions:

- Highly analytical, process-driven detail

- Creative/innovative thought

These two ideals are often viewed as two competing forces in the project. The creative individual might be part of the project team and provide tangential input. Or the creative input comes from management in the form of vision and a big-picture perspective.

COP provides the basis for highly technical project managers and technologists to have a greater understanding and ability to provide the creative direction and input. The primary objective of COP is to ensure that projects of all types are more closely aligned to the business and its objectives.

COP Objectives

The objectives and results of COP are as follows:

- More solid project development (pre-project planning)

- A stronger grasp of a particular business model in as short a time as possible

- More accurate and meaningful project analysis during a project life cycle

- Greater focus on a project's final impact versus mid-project tasks and milestones

- Greater innovation in thought and technical implementation

- Proper relegation of technology as a tool used to achieve carefully defined business objectives

- Greater breadth of knowledge and learning capacity as a result of reducing technology and tasks to their most common elements

The section that follows discusses the origin of COP so that you can understand the COP mindset. This discussion provides insight into my development of COP and its value as seen in numerous projects.

COP Origins

During my time with Blue Cross, I had the opportunity to work in a unique and valuable environment. I was a technology professional who did not work within an information technology (I.T.) department.

Initially, I wanted to to make that transition, interviewing for positions within I.T.. None of these positions offered either the pay or opportunity I was seeking. For a period of my career, this frustrated me. I initially coveted an I.T. title. I discovered, however, that I truly wanted the opportunities I was already being faced with every day.

I worked within a user department. By that, I mean I worked in a department with the users of my programs and technical solutions. For this reason, my title had to be one available to the department. Corporate edict mandated that all technology positions were available only to technology staff.

Instead, I held positions of junior data clerk, business analyst, senior business analyst, and so on. My day-to-day tasks, however, involved application development, network administration, and other I.T.-related tasks.

My unique position provided me with incredible opportunities—opportunities that probably would have been lost working for the MIS/I.T. department.

During this time, I developed a comprehensive, yet simple project development methodology. The methodology first creates a strong understanding of the underlying business model. It is a dual creative/analytical process that fosters innovation and results in a unique business/solution-based focus for your technology projects.

I titled this methodology *Concept Over Process*.

COP has become the backbone to my career as a technologist, consultant, and mentor to other technologists. Many have found it instrumental as a career development tool. Its unique approach properly emphasizes strong conceptual knowledge over straight technical know-how.

Technology professionals who adopt a COP mindset are better able to produce comprehensive business solutions and are more adept at proactive analysis and recommendations. Management recognizes these people more quickly because their solutions, language, and focus are unique in the business model orientation.

What Is a Process-Driven Mindset?

Technology professionals put an incredible amount of time and energy into understanding the how-to of technology. They understand methods. They perfect the process-driven tasks that make their technology implementations optimal.

However, technologists are far less interested and often do not understand the why of technology—what the technology is for. By that, I don't mean the tasks that a given technology performs. Once again, that is the process.

What technologists overlook is a comprehensive understanding of the business challenge—the business model, how it makes money, what products or services it produces, the interrelationship among vendors, departments, clients, and so on. These were the items that were of utmost importance to me and to my boss.

Technology, when understood in this context, is simply a tool to achieve some optimization of an already existing or developing business model. The technology is not the business; in fact, technology is the wrong area of focus for developing good technical solutions.

Before you read any further, I need to make a disclaimer: I am not implying that technical skills are unimportant. In fact, the contrary is true. However, I am convinced that understanding the underlying reasons (business reasons) for technology will lead to far greater technical skill.

A simple example of this is the initial exercise that nearly every programmer goes through when exposed to a new language. Programming books universally give a short tutorial that when completed presents a message box to the screen that says "Hello World!"

Although this exercise exposes the programmer to the language and development interface, it does little to actually develop the programmer's skills in the language. Expertise comes through the application of these skills in solving some business challenge.

However, COP goes beyond a cursory understanding of the business challenge in isolation. To fully understand COP's benefit and impact, you need to have a more complete understanding of business in general, the industry in which you are working, the specific entity for which you work, and the various relationships leading to your solutions.

If you are a technology professional, an understanding of how you approach technology, an understanding of the role of technology, and adopting strategies that

further technology's role in your organization make you much more valuable. Increased personal value ultimately equates to increased responsibility and pay.

The ideas that are discussed in the sections that follow are meant to foster this understanding. They are meant to provide you with tangible ways to change the manner in which you think about business, your company, your role as a technologist, and your understanding of what technology is and its impact on commerce.

The Role of Technology

Understanding why technology exists is a good starting point. After you understand that, I will move into the actual steps of the COP process.

I reduce useful technology into two simple roles, although additional subroles or subsets might exist for each role. In conversations with a number of business owners, managers, and technology professionals, however, the following roles have proven to be effective in categorizing why we use technology.

Role 1: Storage and Retrieval of Information

It's about information. Often, the focus of technology is incorrectly placed on the technology. But the fact is that information is the commodity of value. This is the first role that technology plays.

Technology provides the storage and retrieval of information, specifically, for analysis and decision support.

The rise of segments within I.T. that are dedicated specifically to information analysis indicates that the industry is aware it must give special attention to this area. *Decision support* and *knowledge management* are two such segments, and more seem to be developing daily. These segments function, in some way or another, to advance this first critical role of technology.

Role 2: The Automation of Delivery of Product or Service

The second role that technology plays is one that you can use to greatly enhance your value and propel your career. Automating the delivery of product or service is one of the most important facets of technology.

This can, of course, take the form of automation in the traditional assembly-line type of automation. Robotics is the type of automation that is readily visible in business situations. However, what I term *micro-automation* is also of extreme value within a company. In addition, micro-automation is available to technologists early in their careers.

Micro-automation is the automation that takes place in the office. It can assume the form of document assembly, reporting, automated information distribution, or any other manual tasks that take place within a company.

In many cases, this type of automation receives a low priority. Company business systems, network upgrades, and big-money integration projects tend to gain the bulk of the attention. However, this type of automation can be put in place quickly, does not require the big project lead times, and has tremendous visibility for personal career growth.

Approaching technology projects with a solid understanding of these roles can help bolster your career. They produce positive exposure for your career and real value within a company.

Keeping your company's business model in clear view as you perform your work is what COP is about. It makes you more aware of the impact that technology has and should have in the organization. Your solutions become much more proactive and more closely aligned with the business as a whole.

COP also helps you adopt and learn new technologies. No longer do you view new technology as something you must learn. Rather, you view new technology in relation to its differences from what you already know well. You effectively reduce what you have to learn.

Adopting a COP approach during your career makes you more valuable because you not only understand the technology but also operations, marketing, distribution, and other critical business functions. You soon separate yourself from those who view technology as the primary focus of their career.

From the standpoint of career growth and possible paths you can take, COP provides a much broader possible spectrum. You can move from straight technologist to system analyst, manager, consultant, or business owner.

This idea has transformed the careers of several technologists whom I have trained and mentored. Their increased confidence in dealing with management—because they can speak intelligently about the business—has provided them with numerous opportunities. Most have been offered significant compensation packages. More important, they recognize that they are better able to make a difference in their organization.

This might be the best byproduct of COP: the satisfaction gained from knowing that you are equipped and able to make a positive contribution in your company.

Moving from Process Driven to Concept Driven

How do you move from a process-driven mindset? This can be difficult for the rank and file technologists because so much of their perceived worth is driven by their hands-on technical skills. Remember, however, that my objective with COP is long-term value and the ability to quickly adopt new technologies based on a clear understanding of their role or usefulness.

The sections that follow take you through the methodology that forms the underpinning of COP.

A Concentric View

You will find a common theme throughout this discussion of COP. In all things, I start with the broadest view possible. I am at heart a minimalist. Broad concepts typically answer many of the basic questions, and the minute details are simply tweaks, or details, that are meant to optimize the big-picture view.

Picture a series of concentric circles. COP starts on the periphery, the outermost circle, attempting to capture and see as much information as possible. It then works inward to the greater detail. Each circle is another level of analysis, until you arrive at a detailed understanding of the process or project with which you are involved.

The problem facing many of us as technologists—and truly any highly skilled professional—is a myopic focus on a particular concentric circle or process with which we work. If our starting point is too narrow, we risk losing sight of the impact that our work or project has on the organization as a whole.

Figure 21-1 illustrates the starting points for clearly putting COP to work. The starting points form the concentric circles of analysis:

- Business objective/goal ($)
- Industry analysis: trade publications/mentor
- Organization's role in its industry
- Workflow (money, information, product/service)
- Interaction/dependencies
- Congruencies, incongruencies, omissions
- Project definition
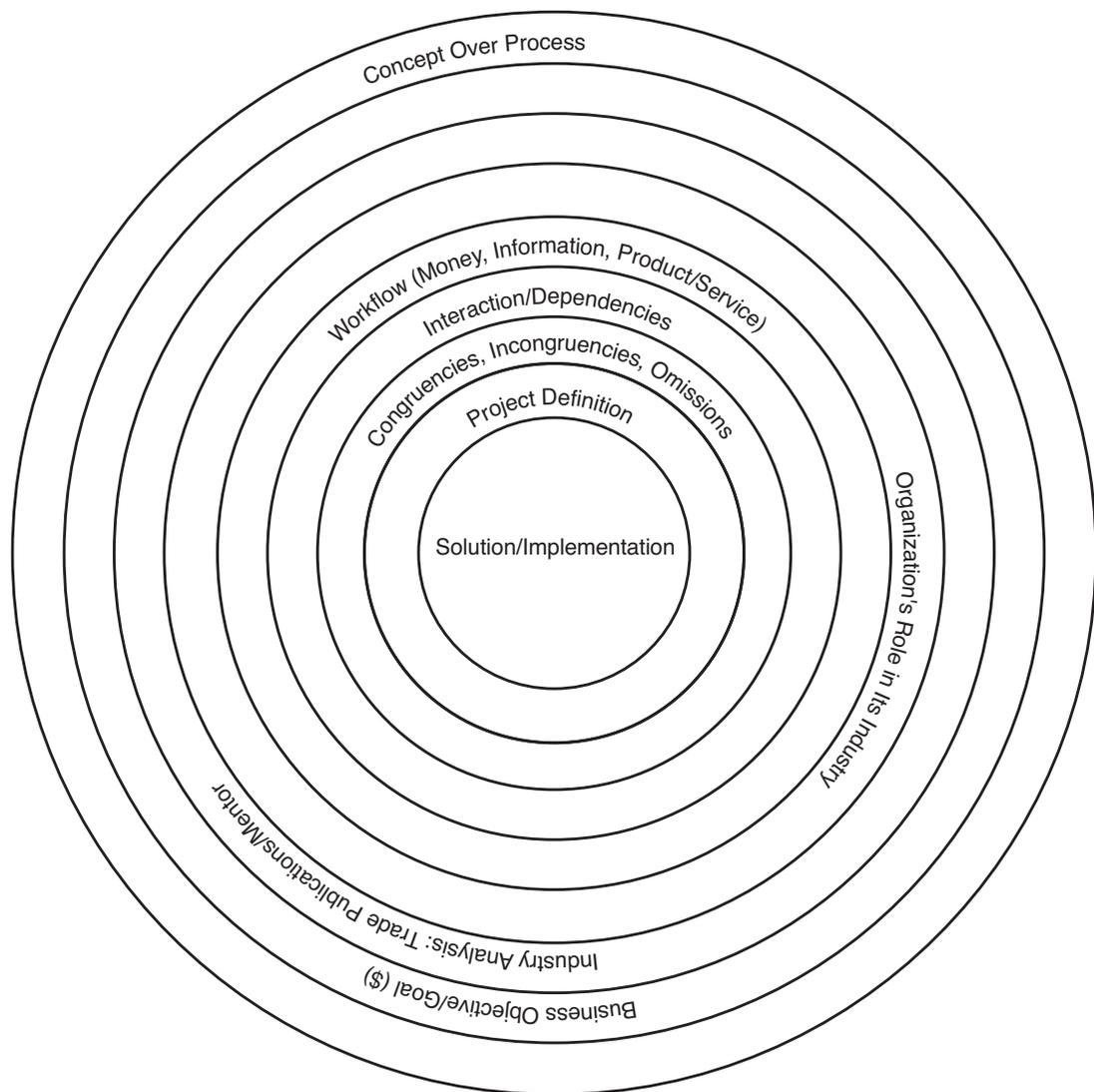- Solution/implementation

Figure 22-1 COP: Concentric circles of analysis.

A Note About Time

COP typically requires more upfront time in project definition. This was often difficult for my clients to understand. I placed a premium on the analysis at project inception. However, we found that projects ran much more smoothly and more quickly when we performed the COP analysis. In addition, projects had fewer costly mistakes and missing components—changes to be added later.

The size of the overall project dictates how far into each of these areas you should go. Certainly, if you are writing a small script or process to perform a niche function for your client, I wouldn't suggest that you spend four days in analysis. The actual project size determines the amount of detail for each segment of COP.

The COP methodology is something that you can employ as an overall client relationship process, too. Although you might not be performing workflow analysis or large system implementation, you can work at gleaning this understanding as you provide day-to-day support for your client.

Developing Proactive Solutions

A key byproduct of COP is the development of a *proactive solution ideology.* As you work with a client or your company and have a greater understanding of the industry, business, and operations, you begin to see where technology can best make an impact. You can intelligently suggest good technologies that fit the company's business and strategic plan.

This takes you out of the position of being a straight technologist—one who implements what the company directs you to—to becoming a solution provider—one who works with the company toward its strategic objectives.

The impact on your career is immeasurable. CEOs and management are often jaded in their view of technologists. They believe that technology departments in general and technologists specifically do a poor job of "aligning I.T. with business objectives"—a phrase similar to many that is creeping into formal job descriptions.

Because COP starts with business objectives as the standard and basis for all understanding, it lends itself to better business and technology alignment.

A Warning/Suggestion

Critical in adopting COP is a desire to have a true understanding of the business. If you don't really care, you will find COP to be tedious, and you will be poor at it. If your idea is to adopt COP to push your particular technology more effectively, you are missing the point.

COP Is Not About Technology!

Although COP is currently framed as a methodology for technology projects, it is just as adequate as a methodology for marketing projects, accounting projects, or manufacturing projects. COP is about clearly defining business in general and then molding your project to that business.

The particular project implementation is the process. COP is so named with reason. It is not *Process Over Concept.* Keep that in mind at all times!

Start with the Goal of Business

This might sound trite or simplistic, but the first idea to grasp is the goal of business—in particular, the goal of your company, client, or organization.

In his landmark book, *The Goal,* Eliyahu Goldratt identifies a key problem facing many companies. His book is focused on manufacturing, but the idea holds true across industries. In the book, Goldratt's protagonist is brought in to help turn around a manufacturing company. From the outset, he asks the various managers what their departments' goals are.

They answer that their goals are efficiency, higher production, fewer mistakes, and so on. He points out that if each of these goals is met and the product sells for a loss, they will have met their goal and the company will fail.

He eventually gets the managers to understand the simple concept that their organization exists to make a profit. That is the goal.

Understand Your Objective as an Employee

Your objective is also profitability. Once again, you might want to provide your services for a worthy cause and not for high personal compensation. That's okay and worthy. But if you can't eat or take care of your basic needs, you won't continue at that worthy endeavor.

What About Mission Statements?

Mission statements for companies were the craze ten years ago. Lofty statements covering ideals and ethics were created to give the corporate culture meaning as it went about its day-to-day operations.

The same is true today with individuals, and that's a good thing. Certainly, having a guiding ideal—a moral compass—that forms the underpinning of your professional and personal conduct is good.

However, as Goldratt pointed out, for many companies and individuals, the mission statement became the goal. A goal is not the same as a mission statement. The mission statement is composed of the underlying ideals with which a company works to achieve its goal of profitability. It includes the values that drive meaning into the achievement of profits.

A personal mission statement can and should be a positive guiding factor in your career development. But it is the way in which you achieve your goal, not the goal itself, that is of critical importance.

From Goal to Analysis

After you have correctly identified the goal, it is time to create the strong conceptual understanding of your particular project. COP is a holistic methodology. As such, it requires more than a simple cursory view of your project objectives. Remember: COP is meant to help you better define the project objectives. Therefore, you must start broader than the project.

A project impacts more than the systems or workflow it replaces or optimizes. A project impacts the people in ancillary departments and even outside the company. For that reason, to correctly and effectively define a project, you must see beyond the scope of the project work itself.

This is a huge point of failure or disconnect on project work in general and specifically in the technology and integration business.

Understand the Industry

The first level of understanding is the industry in which you are working. This can be healthcare, manufacturing, legal, professional services, and so on.

When a new company or new project is being defined, find out what trade journals exist for that industry. Pick up a few and read them. In addition, ask the department head, client, or prospective client for any books that might help in understanding the industry or department. Finally, simply ask this person for time to discuss the industry in general.

This serves a few different purposes. First, you will begin to adopt the language of that industry. You will be able to better speak and understand the particular terminology. Although you might never become an expert in that industry, during subsequent meetings or phone conversations, you will adopt the vernacular and win the industry's trust.

Second, you will gain a much deeper understanding of that particular department or business's position and role in the industry. The client no longer must "dumb down" its conversation about industry-specific topics. It will be comfortable in knowing that you have a grasp on the big picture.

Understand the Business: The Organization's Role in Its Industry

After you have done some research and gained knowledge of the industry, you must delve deeper into the client's business as a whole:

- What is the service or product?

- Where does the client stand from a market-share perspective and its role in the industry?

- Is the client an industry vendor—selling within its industry, or producing product or service that leaves the industry for general consumption at completion?

Then you can work to understand, as quickly as possible, the broader objectives of the company within the industry. Is the company looking at growth within its specific segment or market share? Is it planning to spread to other sectors or roles in the industry?

Because you understand the industry first, what you learn at this step will make sense. Without the industry knowledge, the business-specific knowledge is much less meaningful.

Understand the Workflow

Now you must delve into the how (process) of the company. In this step, you are looking at how the company delivers its product or service. You want to understand, from start to finish, how the company creates, markets, delivers, and ultimately pays for the product or service.

Understand the Relationships: Interactions/Dependencies

Although your project might involve a particular department, it is critical that you understand the relationships that are impacted. This includes relationships both inside and outside the company:

- **Internal**—Relationships within the department, between individuals, and relationships between two or more company departments.

- **External**—Relationships with vendors, clients, suppliers, contractors, and so on.

The objective is to see the impact that even a small project might have on these groups. If you develop a project that makes life easier for a single individual or department but hinders access to key information or makes processes more difficult for a related department, others will view the project broadly as a failure. You don't want to have 3 people pleased for a short time, while alienating 100 others. That's an irresponsible career move.

Workflow Analysis

To understand these workflow and relationship issues, you need to analyze some key items. Each item lends greater understanding to the previously discussed areas of COP—the concentric circles of analysis:

- **Follow the flow of money**—I mentioned this in passing earlier. However, because our stated objective is profitability, the flow of money provides a good way to analyze how a company works.

  The flow of money is twofold: It includes money that the company makes and money that the company pays out.

- **Follow the flow of data**—How do the company's information systems currently track their product or service? How and where does information from all sources get stored, retrieved, and analyzed?

  If you remember that the storage and retrieval of information is one of the two roles of technology, you will understand the importance of this step of the process.

- **Follow the flow of production**—From raw product to finished product, from information to service delivery, whatever the company does to ultimately produce income is where you start.

  I'm not claiming that you will understand each person's role or step in the process. But you must understand in general how the company produces its revenue.

  This moves from the company perspective to the particular product or service that a department or an individual provides. You will be able to see, for your particular project, the impact on the company as a whole.

- **Find the incongruent or problematic pieces**—The overall value of the previous analysis is the ability to locate those areas that create a disconnect. If, during the storage of information, all data is stored in a centralized database, except for customer service requests, you might have discovered incongruence.

Project Definition

With an understanding of workflow analysis in place, you are ready to more clearly define your project. COP is largely a creative/analytical process. It is not purely analytical. In fact, broad concepts tend to be big picture/creative items. They involve

sharing and developing the "vision" of company leadership. As you delve further into the analysis of the particulars, you are moving to the analytical side of things.

Project definition is also not rote analysis—it is largely creative and innovative. Project management as a process is often solely a process-driven/analytical exercise. COP attempts to meld the creative/innovative process with the analytical steps of project management.

Myth of Limitation

As project development begins to take place, it is critical that you, as a technologist, understand and remove the myth of limitation.

The myth of limitation is most often seen when a company or department's nontechnical staff approaches its I.T. provider (either internal or external) and asks for a particular technology:

> "We need an Access database to track customer service requests."

> "We need *X* product installed on each system."

The requestor might be correct in the stated need. However, you'll often discover that the requester is only partially correct. He will have come to I.T. defining the technology, not the business process to be solved.

A company might need a database to track customer service requests. But what about other department access to the information? What type of request? What is the objective of this data? How will it be used, and are there other desired customer service functions it should track or be able to respond to?

The myth of limitation is the partial understanding by nontechnical staff of what is available. In many cases, departments have heard of a technology being put in place at a similar operation. An identified benefit might exist; however, more comprehensive solutions might be achieved at just a little more cost.

Removing the myth of limitation involves a what-if mindset.

What If?

In meetings with clients, I often frame my question this way:

> "If time, resources, and money were no object, how would you like things to work?"

It might be that clients' requests become too outlandish or expensive to implement. But it is just as likely that when properly defined, technologies are available to meet a good portion of clients' needs with little to no impact on costs.

Whether the broader solution is possible or not cannot even be discussed unless you remove the myth of limitation.

To be able to do this, you need to be able to speak and understand the clients' language. I cover this in more detail in my article "Why Technologists Must Learn to Speak Business." You can download a copy from www.ITCareerToolkit.com.

By speaking in clients' business vernacular, you make them more comfortable to approach you as a peer in business, not the technology pro. Although you want to be the technology pro, you first must understand the clients' business need. Remember: Technology is just a tool used to provide that need.

Congruencies, Incongruencies, and Omissions

As you move further into project definition and your solution, the following steps become the standard for identifying and clarifying the solution. You will use them over and over again for each project step and to analyze project changes.

Congruencies: What Currently Works

Quite simply, what technologies are in place and what workflows currently work well with the individual, department, related departments, and external relationships? Does the technology in place and workflow work in unison?

Incongruencies: What Currently Does Not Work

Is there currently a discrepancy in technology and workflow? Is it technology related (bad product or information), or is it workflow related (how the client goes about its operations)? Is it both? How can the incongruency be addressed or solved? Are tools in place to help with this?

Omissions: What Is Currently Excluded or Not Addressed at All

What does the client not track, automate, or perform as part of its operation? This aspect is a little trickier to identify. It often involves information not being tracked in relation to a current workflow process or automation. The information might be available but not used. Often, these discrepancies are because of a status quo ("We've always done it this way") mentality.

Conclusion

COP is ta valuable tool for project development. As stated earlier, the larger the project, the more detail you will use when employing these techniques. As you apply this ideology more and more, you will find that you begin to do so intuitively. Proactive solutions will become the norm and create a distinct advantage in your career advancement.

In addition, your ability to analyze business and projects for their value will be greatly increased. Those technologists whom I have trained in COP have shown the ability to perform a broader role for the organizations in which they work. Often they are included in marketing, business development, and general planning.

COP is not technology-centric; therefore, it is one of those transcendent skills that you take with you from year to year. This reduces some of the *stress* associated with the constant pace of change and learning required to stay up to date with the latest advances in technology.

For the technology professional, one of the most powerful aspects of COP is its capability to reduce the learning curve for new technologies. As you begin to become focused on the business concepts to be solved and technology's role, you will begin to view new technologies for what they are—new tools to adopt.

The impact is that you can better focus on the uses for the tool, instead of the tool itself. This helps you understand how or why a tool is useful and how it's conceptually different from another tool. You no longer need to learn all aspects of the new tool. Instead, you can study key differences with other well-known tools. What you need to study or learn is reduced as a result.

If you are interested in a further discussion of COP, register at www.ITCareerToolkit.com.

Actions & Ideas

1. Think about your career to date. Have you been largely process driven—focused on optimal technology without regard to the conceptual picture?

2. Look at a current project (solution) and quickly analyze the myth of limitations and congruency, incongruency, and omission. Do these concepts help you to better define the possible solution?

3. Analyze how you learn new technology. Can COP help you to better learn technology starting at a broad vision of its goal or purpose?

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Remember to visit the book's website at http://www.ITCareerToolkit.com for supplemental and ongoing advice, tips, and data relevant to this chapter.