

# LOST IN TRANSLATION

A handbook for  
information systems  
in the 21st century

nigel green & carl bate



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**Lost in Translation:** A handbook for information systems in the 21st century

Nigel Green & Carl Bate

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# Dedications

**Nigel Green:**

“To the Lost Business Analysts and my long suffering family – Den, Lizzie, and Rosie.”

**Carl Bate:**

“To the spirit of ‘TCG-ers’ past, present, and future – without whom this book would not exist. And with thanks to Lesley, Jackson, and Anna for joy and inspiration.”



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# Foreword

**W**e live in an age where technology increasingly pervades all aspects of life. Technology that was barely imaginable a generation ago is now commonplace. It has had a profound impact on how we organize services in public, private, and voluntary sectors. But all is not well.

Many organizations struggle to justify investment in IT. The reputation of the supply side for delivering late and over budget damages credibility. Reaping the benefits of investment is harder than it first seems.

It can often feel like a dialogue of the deaf between the IT professionals and the business leaders. One group talks about SOA, IPv6, SaaS, and SQL for instance, while the other side talks about innovation, transformation, efficiency, and customer service.

The authors of this book bring together many years of experience, reflecting on learning from projects in many sectors. It is their belief that it is in the initiation of dialogue, the communication between the parties, to which ultimately an IT system will be part of the solution, that many of the problems arise.

To illustrate some of the challenges faced, consider a few cameos of problems for which technology solution is sought.

## ***Improving Health***

You are asked to build an IT system with two key objectives. First is to support and enhance clinical effectiveness. Second is to improve

patient outcomes. The system must support data protection, patient confidentiality, and medical ethics.

Explain what the information system is that supports the following patient example.

A woman aged 38 presents herself for fertility treatment. She has been married twice before. Both marriages broke down after failure to produce a child. Last year she met Mr. Right, who wants a child as much as she does. It hasn't happened.

Her younger sister died from breast cancer last year. There has been no family history of breast cancer.

She has a BMI of 32. She has black coffee, orange juice, and a banana for breakfast. She has a light lunch and cooks in the evening for herself and her man. They both like fish and don't eat red meat. She doesn't smoke. She doesn't snack between meals. She is a light drinker, 15 units per week.

He has a child by a previous relationship but doesn't see the child, who moved abroad with the mother when the child was very young.

### ***Business Continuity***

The increase in tensions following a terrorist attack requires the local authority, police, and regional transport to improve communications with a variety of agencies. The experience has shown that many businesses were unprepared for the event and there has been a significant loss of business. Some jobs have been lost in the area and this is spilling out into tensions with the ethnic minorities.

A capital grant has been allocated to build an IT system to improve communications between all the parties. If successful this system will be rolled out to other towns and cities at risk of terrorist events.

Will the system, when operational and debugged, roll out effectively to a similar sized town with a similar ethnic mix?

### ***Mergers and Acquisitions***

A branch-based financial services company acquires a direct sales organization in a complementary field. There is little need to shed jobs. However, the CEO wants to integrate existing infrastructures

and build an IT system to maximize any synergies and to create a one company culture. Where do you start?

### ***Advertising***

A successful print media, radio, and television advertising consultancy branched out some time ago into Web advertising. The staff was poached constantly and the business hasn't developed in the way they hoped. A tipping point has been reached in their core business. They believe that they have 2 years to build credibility and a business in online advertising or they will face serious decline. What would you advise?

### ***Values Espoused and in Practice***

Company X is a holding company. The chairman and founder buys and sells organizations within the overall corporate structure in diverse market sectors. There is a very small center. All functions are devolved into the operating businesses.

The Chairman thinks that next year there will be an economic slowdown, and hires a major consultancy to advise him on reducing his cost base to improve resilience if his fears are realized. He is very close to the consultancy in question.

They point out that for an organization of their size they spend twice the level on IT as two organizations that he sees as a benchmark.

You are invited to respond to this finding. How do you go about it?

These examples show many of the types of challenges faced in initiating a dialogue between business and IT. Among these challenges is the open ended or vague description of the problem. The solutions require organizational and individual behavior change. Some have complex stakeholder engagements. There are legal, moral, and ethical issues to be dealt with. Building a business case and measuring benefits is tricky. Technology may be a driver rather than a response.

The danger is that “IT is the answer, now what's the problem.” The focus is often on the T, the technology, and less so on the I, the information.

This book redresses that balance. The thinking framework outlined here is aimed not on the IT system, but on the Information System. It does not seek to replace or nullify the engineering disciplines needed to design and deliver the final solution, but aims to address the need for a common language between business and technology people so that what is achieved is “I have a problem, how can IT help?” That is a bold aim. By building a common language and a shared understanding of the information system between the different stakeholders, the authors argue that many of the frustrations felt around IT can be overcome, to the benefit of the economy and the wider society.

**Dr. Chris Yapp**

# Introduction

This book addresses a crisis of communication so entrenched and intractable that many people cease to notice it any more. When business and Information Technology people sit down at a table to solve problems and build new solutions, the outcome is rarely pretty and often the process can be downright unpleasant.

Often, *what* a solution should do for the business is described in the broadest strokes. *How* that solution might be implemented is described in microscopic detail. This book explains how to bridge that gap, so that comprehensive communication leads to better solutions.

It turns out that communicating about technology is much harder than anyone ever realized. The development and use of a wide range of technologies that we collectively describe as Information Technology or “IT” has, over some forty years, changed unimaginably, not just its technical capabilities, but in its role and relationships to business and people as well.

In reality, the use of the term “IT” to describe the technology used by people in business today is out of date. When asked, most people would name the improvements in communication, together with the introduction of the Web, as the most significant changes in recent years, and neither was recognized or included in the origination of the term “IT” in the late ’80s and early ’90s. The term ICT, standing for Information and Communications Technology, is perhaps more representative, but even that fails to adequately convey the way people

relate to and use the various forms of technology now available at work or at home.

If we have trouble with defining the scope and terminology of the topic at this fundamental level, the issues business and IT departments face when working together to provide solutions that the business really wants are even more overwhelming. At the fundamental level, the need to understand the critical business needs, and indeed, what IT can practically deliver, is paramount—but do we have the capability to achieve this? It is the rare company that can claim consistent success in crafting IT to meet business needs. We think communication is at the heart of this inconsistency.

Currently, technology product vendors are rising to the challenge of providing new capabilities, but there has yet to be a corresponding elevation of the *thinking process* of how to design, implement and manage these products to deliver business outcomes in the connected world.

In one respect, the increasing interest and focus on “architecture” is a reflection of this need to approach solutions in a methodical way, starting with the business requirement. But from a more behavioral perspective, traditional IS/IT architecture fails to provide the full answer. This is probably due to its engineering roots and the more recent gravitational pull of IT advancements.

Increasingly, businesses—and therefore the *systems* of business—are both “loosely coupled” and provide “any-to-any” re-combinations, often with some part of the value chain or IT solution external to an enterprise and therefore not under its control. We are lacking the language to describe this world that works both for “the business” and “IT.”

People will recognize in VPEC-T elements that apply to both the business requirements-definition process and the application of technology; but its real value lies in how business and technology aspects are brought together to make a cohesive, simplified and yet comprehensive approach to the entire problem.

**Andy Mulholland,**  
**Global CTO, Capgemini.**

## Chapter 1

# VPEC-T: A Five-Word Path to Improved Communication

Just imagine for a second that communication between business and Information Technology (IT) was perfect. What would that mean? Business could explain the requirements for a solution and IT would provide it. The requirements would more accurately reflect the needs of the business and the resulting solution would be closer to what was desired. The solution delivered could never be perfect, of course, but if it were just good enough, most businesses would be wildly happy. Then based on experience, the solution could be improved as needed.

This book is about one way to get closer to this simple vision. The thinking framework at the center of this book, VPEC-T, enables the business side of a company to capture requirements for an IT solution more accurately and communicate them more effectively to the IT staff.

By using the idea of the information system and the five words: Values, Policies, Events, Content, and Trust, people can find new ways to come together and resolve the underlying tensions within the information systems in which they participate. The power of VPEC-T has

An ancient Chinese proverb says:

**"We start the journey to wisdom when we call things by the right name."**

Centuries later, Leonardo da Vinci asserted:

**"Simplicity is the ultimate sophistication."**

And more recently, Dee Hock, the founder of Visa International, famously said:

**"Simple, clear purpose and principles give rise to complex, intelligent behavior. Complex rules and regulations give rise to simple, stupid behavior."**

*It seems we've been wrestling with problems associated with the language we use and how to communicate concepts important to us, ever since we decided to share information. We seem attracted to the apparent eloquence of prose and academic discourse. This often clutters our thinking and buries the very idea we wish to communicate under confusing terminology and ill-defined language—as perhaps Leonardo da Vinci implied. Dee Hock understands the importance of clear and simple language and the effects on desired business outcomes when we are overburdened with unnecessary complexity.*

been proven through real projects and has delivered tangible value. The authors wrote this book so that even more people can benefit from this simple but powerful approach.

## **Barriers to Communications across Business and IT**

Since the middle of the last century, the IT industry has created a whole new language to describe concepts that simply didn't exist before, such as software, databases, the Internet, the Web and so on. This language is now part of our everyday life, and *if used correctly*, helps us describe various useful technologies and technical concepts.



### VPEC-T Cheerleading

*Throughout this book you will see boxes like this one marked with the VPEC-T megaphone. We call these “Cheerleading Boxes” because they contain the unrestrained enthusiasm that Dan Woods, the American playing the role of editor and consulting writer to this book, has for the idea. These boxes are a compromise that resolves a conflict in Values that arose early in the writing*

*and editing process. Nigel Green and Carl Bate, the British inventors of VPEC-T and the primary authors of the book, tended to couch their language in reserved terms. This reserve was true to the values of Capgemini, but Dan felt that it was at war with effective communication about the value and workings of VPEC-T. Nigel and Carl’s Values were oriented toward measured claims. Dan sought to oversimplify and then exaggerate. The compromise reached is that Dan gets to gush wildly about his enthusiasm for VPEC-T inside these boxes, and that Nigel and Carl can keep their content safely apart from such giddiness. So, sis, boom, bah—here it goes.*

The people who work in IT never intend to provide solutions that are ill suited to the business. At the beginning of each project, they want to do their best to help their companies succeed. The people on the business side of the equation also start with the best of intentions.

It doesn’t seem to matter what business outcome is sought (e.g., reduce cost or increase value), what type of business process design is adopted (e.g., standardized or specialized), or what type of IT solution is adopted—(e.g., a business software package, a custom build or use of “Software as a Service”). The resulting collective effort of business and IT in the “IT enabled business change” program invariably seems to miss the mark.

VPEC-T is the solution to this problem because it gives the business a way to express its desired outcomes and a way for IT to express the art of the possible—on paper—and have a conversation about it. VPEC-T uses the idea of an information system as a model of a “business-IT solution.” The information system perspective is one that is concerned with the attitudes

and behavior of the business and people involved (Values, Trust), the specific rules that are in place (Policies), and the way the information is represented and flows from one step to another (Content, Events).

What VPEC-T captures is the personality of a solution. The first step is to do therapy on the personality captured. Are any Values or Policies in conflict? Once these are resolved, the business and IT can work together and use this personality to guide the business transformation without going back to the business side to ask questions about every little detail.

VPEC-T also changes your thinking about most complex issues. Once you know VPEC-T and have used it, you are on the search for conflicts in Values or sources that corrode Trust. You wonder if any policies are contradictory. You understand systems by first looking for the real-world Events and business Content that matters. Read on, you won't be disappointed.

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The problem, however, is that this IT-based language has crept into the way businesses describe and shape their requirements of an Information System, which steers the discussion between business stakeholders and IT specialists toward the *IT-how* rather than the *Business-Outcome-What*. Furthermore, because of the high degree of specialist knowledge required to understand the myriad technologies available today, business folk often find themselves lost in IT concepts. From a business point of view, the IT guys can over-complicate things. This needless complexity seems more pointless than ever in contrast to our personal lives, in which we use simple and direct IT solutions from Web sites, cell phones, and ever-converging forms of consumer electronics. From the IT specialist's point of view, they can find the requirements discussion hampered by this perspective; they are often left with the feeling that "A little knowledge is dangerous."

This is just one example of many frustrating discussions (for both parties) that take place across the Business-IT boundary. We believe the primary cause is rooted in the "lost in translation" problem between the two worlds.

What if there was a technique to enable business and IT specialists to share a common language? What if the insights gained could be communicated at an appropriate level of detail with the Board? Can the “Business/IT divide” be eliminated?

### The premise of this book:

This Business/IT divide is the *raison d’être* of this book. The “business” and the “IT” that it uses all form part of the same system (*Information System*), made up of people, process, information and technology. Yet, often the “business” and the “IT that it uses” are not seen as an integrated whole. Worse still, it sometimes seems that the business and IT communities work against each other, even as they are charged with collaboration.

The business/IT divide has emerged out of the rapid advancements in IT and the associated need for new language within the IT industry. This rapid evolution in the IT industry has made a beeline for industrialized techniques, such as business-process modeling and IT engineering. This industrialization has done a reasonable job of defining *how* IT should work but has failed to define *what* is really needed—and *why* it’s useful. A common understanding of the *what* and *why* aspects of the Information System within a business is critical. Its absence is the key reason that such an apparent business/IT divide exists today.

We lack a simple technique for understanding and communicating all the aspects of an Information System. In the business world, many easy-to-use analysis techniques exist and are accessible to all—and they are often in common usage. Take for example, SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis. In this framework you analyze every issue by listing the ideas and concerns in each category, and then use the resulting analysis to guide future action and decision-making. Such a process is extremely simple and yet powerful for driving consensus on the shape of a business initiative. But we are missing something analogous in business/IT collaboration. The primary aim of such a technique is simple:

- For the business—to be able to express desired business outcomes in language IT managers can use.
- For IT—to be able to express solutions in language business leaders can use.



### *The Awful Truth*

There are two common patterns for the way that business and IT staff fail to communicate: the Merry-Go-Round and the Blank Stare.

A Merry-Go-Round meeting about gathering requirements for a new business solution starts with someone bringing up a goal for a new system. Then someone objects to it or adds another goal or requirement. Then perhaps an IT person explains what they would do to meet that goal, or how the requirement is impossible to satisfy—or perhaps that IT can do different things the business hasn't even thought of yet. The conversation wanders. A list of requirements starts to appear on a white board. Some of the goals and requirements are broad (“increase sales”); others are detailed (“integrate with Blackberries”). In the best case, a list of goals and requirements is delivered to IT, but what comes back is a solution that is in the shape of what the vendor already offers. The fit is awkward.

In the worst case, usually in an environment of hostility and mistrust, the meeting descends into acrimony. Sarcastic comments lead to nasty objections and recriminations about past failures. The meeting skitters about until someone out of frustration screams, “What are we talking about?” or, “Why are we even talking about this—shouldn't we just use x or y? (where x = a business application package and y = a service delivered over the Web as a ‘Software as a Service’).”

The other pattern, the Blank Stare, is far more subdued but just as unproductive. In this sort of meeting the business people know they want to improve the support for their business

process, and suspect technology can help, but they do not know exactly how to express themselves. The meeting starts with the delivery of high-level requirements, but the business people lose steam. They do not know how to explain what they want because they do not know what's possible. The IT department starts explaining what is possible, but the business people do not understand, and are not always quick to say that. The business people sit there with blank stares that seem to say: "We do not know what you are saying and we do not have anything more to say." In this case, a list of goals and requirements is delivered to IT, but what comes back, again, is a solution that is in the shape of what a vendor already offers or what the IT department has already built. The fit is awkward. The system does not help as much as it could.

And it's little wonder that while such meetings are going on, often other folks in the business are using whatever IT they can—office applications, Web applications, whatever they can get their hands on—just to get the job done.

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## **VPEC-T: The Five Elements of Successful Information Systems Analysis**

When used properly, the information-systems perspective as shown in Figure 1-1 provides a common ground for business and IT to discuss what's needed—and what's not needed—and how what's needed will be adopted.

There are 5 critical dimensions to the Information System view—expressed in VPEC-T.

VPEC-T is a simplified and accessible technique that can be adopted by the business stakeholders and users, and IT, to create a shared "thinking" language to guide the joint business-IT decision-making. VPEC-T, just like SWOT, creates a simple process for approaching any problem and describes the resulting analysis.

### *Fred Brooks on Conceptual Integrity*

From: *The Mythical Man-Month: Essays on Software Engineering* by Fred Brooks

“To make a user-friendly system, the system must have conceptual integrity, which can only be achieved by separating architecture from implementation. A single chief architect (or a small number of architects), acting on the user’s behalf, decides what goes in the system and what stays out. A ‘super cool’ idea by someone may not be included if it does not fit seamlessly with the overall system design. In fact, to ensure a user-friendly system, a system may deliberately provide **fewer** features than it is capable of. The point is that if a system is too complicated to use, then many of its **features** will go unused because no one has the time to learn how to use them.”

While SWOT categorizes thinking about an issue in general, exploring the extremes of two dimensions (Strengths vs. Weaknesses, Opportunities vs. Threats), VPEC-T breaks down all the aspects of an Information System into five core dimensions, as shown in Table 1-1.

VPEC-T provides the business and IT specialists a better way to communicate, simplifying the language used to describe the outcome-affecting aspects of the business’s entire Information System.

At the highest level, the VPEC-T Thinking Framework is an analysis tool and communication vehicle for business and IT stakeholders to aid decision-making processes. This is in contrast to engineering tools, which are used to implement a decision once it has been taken.

- The VPEC-T Thinking Framework is focused on the analysis of the behavior of people and organizations and their interaction with information systems.

- Its objective is to surface issues and concerns early, and in so doing, avoid costly mistakes.
- It focuses on real-world Events, Content, and Policies, and on the Values of people and organizations, and their Trust relationships.
- It is designed to free analysis activities from engineering rigor, thereby helping decision-makers.
- It is an aid to defining an information-systems strategy.
- It is designed to build in adoption approaches from the outset, thereby materially increasing implementation success.

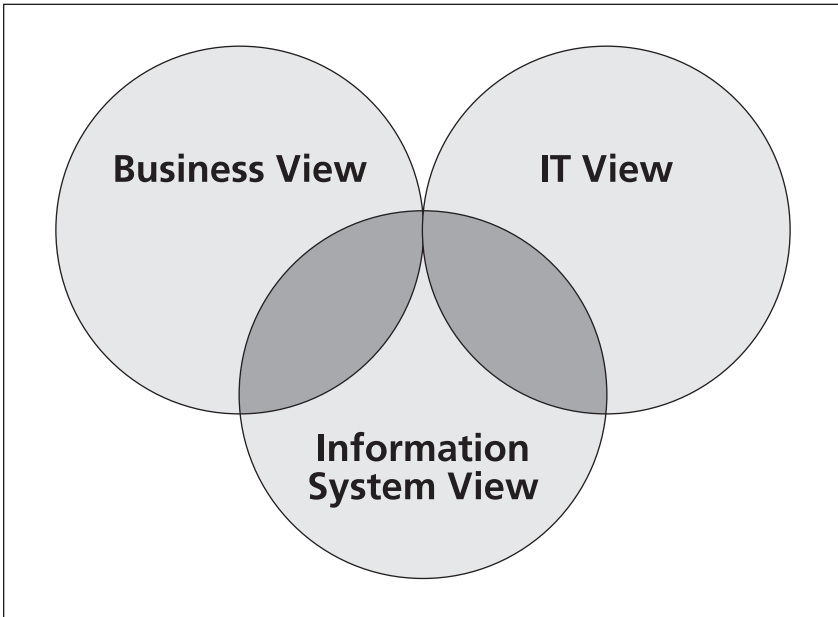


Figure 1-1: Business and IT Connect Via the IS View

At subsequent levels of detail, VPEC-T thinking can be applied to inform detailed design and to guide business transformation endeavors—or it can be applied simply as a things-to-consider-memory-jogger in project reviews.

Dimension	Applying emphasis and techniques to:
Values	Focus on understanding the Values and desired outcomes of both the individual and the business, and the values of individuals and businesses you interact with. Values can be thought of as constraining beliefs (e.g., ethics) and goals (e.g., desired outcomes).
Policies	Focus on the broad range of mandates and agreements such as internal policies, law, external contracts across the business: the rules that govern and constrain how things get done.
Events	Focus on the real-world proceedings that stimulate business activity—sometimes in a pre-defined sequence but often not. These are the triggers for action.
Content	Focus on the documents, conversations, or messages that are produced and consumed by business activities. These are the dialogues we use to share a plan, a concept, a history, and/or the details of a person, place, or thing.
Trust	Focus on fostering Trust between all parties engaged in a system of Value. Trust changes over time, and understanding and fostering Trust relationships are critical to useful IT. The deeper the Trust relationship, the more Values will be authentically disclosed and declared. Trust can be defined as $\text{Trust} = \text{Intimacy} + \text{Credibility} / \text{Risk}$ .

Table 1-1: The VPEC-T Dimensions

### *Why the horrible acronym?*

*We thought long and hard about what to call our thinking framework for Information Systems. After much discussion and many rejected suggestions, we reverted to a meaningless word that is nevertheless a meaningful acronym—VPEC-T. We found that trying to use the English language’s words to describe it just got in the way and overburdened it with inherited meaning. We also found other acronyms to be hollow-sounding, pompous, or full of marketing hype.*

*So rather than use such words, we invented an abbreviation that reminds us of the five dimensions, but also gives a hint at the relationship between them. We start with the “V” for Values, as that seems to be the foundation for any discussion, in our experience. This is quickly followed by P, for Policies—Values and Policies are close bedfellows. Likewise, Events and Content are really inseparable twins who are great pals of Policies. Then, last, but by no means least, we have Trust, and just before Trust we have a pause—the hyphen (-). Why the pause? We’ve found that, in order to really uncover the Trust issues and concerns, we need to first have a discussion about the other four dimensions, take stock, and then get to the heart of the Trust issues.*

*So, it might seem strange that in a book that suggests simplicity of language, we have introduced yet another acronym (the irony is not lost on the authors!), however, we believe VPEC-T is the most authentic and useful name we could have developed. Oh, and one more reason: clients and colleagues are already using the term—it has a life of its own now!*

- It is designed to be complementary to proven methods for process and IT requirements/design.
- It helps surface the too-often obscured, outcome-affecting aspects of IT enabled business transformation.

VPEC-T is not a replacement for tried and trusted business-process and IT-engineering methods; rather, it provides an uncomplicated, unifying, business/IT language to complement them. It is specifically designed to support better business/IT collaboration, empowering more relevant and timely executive decision-making about the use of IT.

## The “First-First” Mentality

The behavior of the individuals, groups, and automated and non-automated sub-systems are the *real* Information System. This system is usually as dependent on one-on-one conversations and sticky-notes as it is on corporate IT solutions.

Just as the SWOT framework attempts to surround an issue and identify the best and worst cases, VPEC-T surrounds the complex behaviors in an information system and attempts to surface the forces driving that behavior and the flow of information and activity, as shown in Figure 1-2. To improve or otherwise change an information system, all outcome-affecting aspects of the behavior (current and desired) of the Information System must be considered. And it’s best to think about them *before* a lot of money is spent on IT.

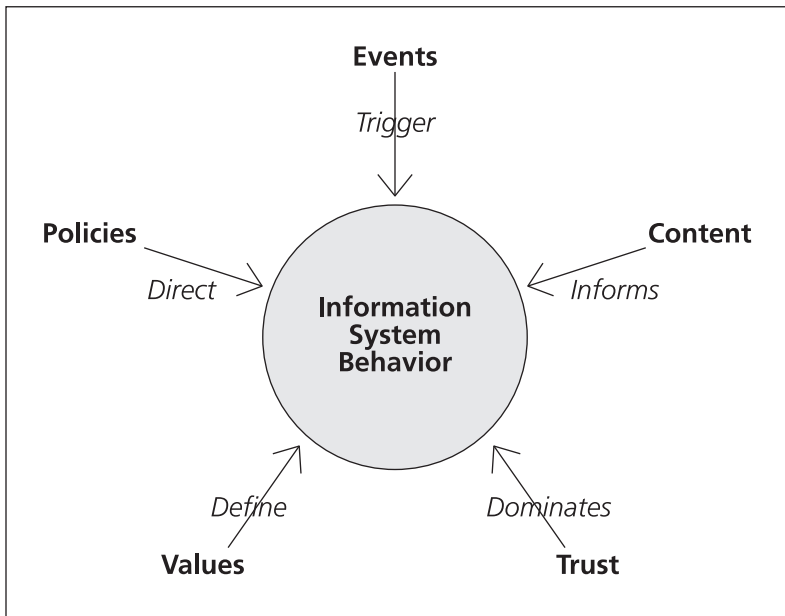


Figure 1-2: Information System Behavior

### *The Impact of VPEC-T*

The focus on behavior produces a wide variety of benefits. Here are some of the results that are commonly achieved by using VPEC-T to structure and focus conversations, analysis, and design:

- Barriers to adoption of IT solutions and opportunities for process improvement are identified and addressed *before* buy or build decisions are made.
- Cultural, organizational, and policy conflicts are surfaced and resolved before the solution is created—instead of just implementing a solution that embeds such conflict in the way the company works.
- The softer, human side of information systems is directly addressed and discussed, which surfaces conflicts and tensions between the Values and Trust relationships.
- The larger landscape in which the information system being created is described, so that the solution can be constructed to meet a wider set of needs.
- The Policies of the information system are made explicit, which provides clear guidance to those implementing the solution, ensuring that business requirements are just that—*requirements*, as opposed to an implementation convenience.
- The Events and Content of the information system are made explicit, which tends to move the architecture of the solution toward an Event-driven approach that makes the solution flexible, and integration with other systems much easier.
- Adoption becomes much less of a struggle, because business users recognize the way they actually work in the solutions created.

Just about any sharing of information between people using any tool is an Information System—imagine applying the five dimensions to an Information System called “Dinner Party”:

- Values—each guest has a set of Values that determine his or her meal preferences and seating.
- Policies—this might be the etiquette surrounding the use of cutlery.
- Events—these are the changes in state when, say, each dish arrives, or as people are seated.
- Content—this would be the menu and the conversations—possibly the reason for the party.
- Trust—this might be the Trust relationships between each of the guests, which would impact the quality and depth of their conversations. It might also be the collective relationship between the party guests and the cook/serving staff.

Using the five dimensions, we can describe the complete behavior of the ‘Dinner Party Information System’ and the desired outcomes of the host, all the guests, and those involved in delivery of supporting services (e.g. cooks and servers). In contrast, imagine if we tried to model the same party using process and data modeling tools and techniques, we would lose important facts—facts that affect the outcome. So, if it’s hard to model the simple information system of a dinner party, what are the chances of modeling an entire corporation’s information system without losing important facts? Preventing this loss of information is the aim of VPEC-T analysis.

We can look to the practice of asset management in manufacturing for a more business-focused scenario. Asset management is the practice of maintaining all the equipment in a facility and making sure that it performs a in way that increases return on investment and meets corporate goals. Here is a brief summary of the sort of issues a VPEC-T analysis would surface:

- Values

Asset management staff is rewarded for avoiding unplanned outages, reducing maintenance costs, and performing maintenance on schedule. These Values require bringing equipment offline to maintain it, and are frequently in direct conflict with operations personnel, who run the equipment to create the products that are sold. The operations personnel want to keep the equipment running constantly to increase throughput. Building a solution for asset management that does not address the communication needed to resolve this conflict will result in the *automation of tension*, not productivity.

- Policies

Asset management changes policy based on the position of the factory in the market. If the market is sold out, meaning that every product easily finds a buyer, then the Policy is to focus on keeping the equipment running, rather than reducing maintenance costs. In a market where the products are not sold out, the policy may be to reduce maintenance costs as much as possible. Any solution must be aware of these Policies and the ebb and flow between them.

- Events

The work orders that maintenance technicians use to perform maintenance tasks or inspections are generated from a variety of sources. Scheduled maintenance based on the calendar or usage levels generates work orders. Systems that monitor the condition of equipment can generate work orders automatically. When a policy changes or a safety Event happens, every piece of equipment may need to be checked for a certain type of defect. If all of the Events are systematically searched for and identified, the resulting solution will be able to automate and process them efficiently and have the best chance of success.

- Content

The work order is the key information dissemination and collection device for asset management. Information collected on the work order is used to create asset and maintenance histories, and to determine which parts are needed from inventory for a repair. A detailed understanding of the flow of Content to and from the work order can provide those implementing a solution with a complete context, so that as many needs as possible can be met.

- Trust

Maintenance technicians frequently ask operations for a window of downtime to perform repairs. Operations staffers ask maintenance to skip the maintenance window so they can keep running. The information system supporting both of these activities must provide each conversation with the information needed, so that the decision about each request can be based on data, and not politics or local priorities. In order for the conversations about asset management to be effective, both sides must trust that the other is performing in the best interests of the larger organization, not just to meet their own selfish needs. An information system provides the data and support for collaboration needed to build Trust.

## **Conflicts and Change**

The bulk of this book will explain VPEC-T, its implications, and how to apply it in greater detail. The explanation will be more effective, however, if we keep the following aspects of VPEC-T in mind.

### *The Search for Conflicts*

As the dedicated reader will discover from the practitioner interviews at the end of this book, perhaps the biggest benefit of VPEC-T analysis is the identification of conflicts of various types and the attempt to resolve them sooner rather than later.

Conflicts in Values or Policies are a huge source of unclear or conflicting requirements. A systematic search for the way that two or more conflicting Values may come into play in an information system brings a sharp focus to the need for describing the correct behavior. Often the correct behavior cannot be described without first resolving the conflict in Values. VPEC-T analysis also frequently surfaces contradicting Policies. Frequently, these conflicts are easy to resolve, but sometimes they require effort on the part of senior staff in an organization. In any case, recognizing the conflicts avoids wasting time building solutions that lack clear direction about the correct behavior that should be supported.

Another cultural change that VPEC-T brings about is the direct acknowledgement of the result of past failures and poor communication in an organization. The echo of these failures is a nagging sense of distrust between all parties that works against progress of any kind. The first step forward is to acknowledge that this mistrust exists, and to understand that, if it goes unchecked, it will be



### *Fix It Before It's Broken*

One of the central points of VPEC-T is the notion that conflicts in information system design must be dealt with and resolved in order to get the highest chance of meaningful results. The process of working through the dimensions of VPEC-T can sometimes surface conflicts in an organization that had previously been shoved under the carpet—this is a good thing! By bringing these conflicts to life and thinking about how they might be resolved, the tensions that would otherwise thwart adoption of the right IT solutions are dealt with in advance. This also gives the business an opportunity to resolve conflicts that may be affecting other aspects of the operation, outside of the specific information systems problem you are trying to solve—one of most subtle and powerful aspects of the VPEC-T technique.

a corrosive force. The second step is to use VPEC-T to achieve small victories that act to restore Trust. Eventually, in an environment of Trust, VPEC-T analysis speeds business transformation. In other words, Trust is efficient.

### *Adoption Engineering*

While use of VPEC-T generally has a profound effect on the way business and IT work together to deliver the business change sought, the related practice of Adoption Engineering, which is covered in Chapter 5, is also proving to be powerful. Adoption Engineering is a family of approaches and frameworks and styles that focus on:

- *How IT solutions will be **adopted** by the users and other stakeholders.*
- *How to first clarify the desired **business outcomes** and then maintain focus on them.*

Adoption Engineering comprises a broad family of techniques—some of them well known, others less so. VPEC-T is part of the DNA in this family—it underpins many of the techniques in a way that combines business and IT—or to be more precise, in an Information Systems way. VPEC-T is the common language of Adoption Engineering.

While VPEC-T acts to turn the lights on and expand awareness, Adoption Engineering explains specific techniques and practices that act to promote focus on adoption of the solution.

## **VPEC-T as an Architectural Paradigm**

When architecture practitioners are involved in doing a VPEC-T analysis, it frequently changes their thinking about the nature of architecture. With Values and Policies setting the framework and Trust as a key concern, architects frequently start thinking of systems in terms of Events

and Content that are used by an information system but not owned by a particular application or database. This can move the architects (business, IT, and enterprise) in the direction of more loosely coupled, event-driven architectures, implemented using a system of services. The result is that the architectural constructs used by IT are abstracted out from the technology used to implement them. In other words, architects are infected by information systems thinking and tend to think of VPEC-T not only as a framework for analysis and requirements, but also as an “architectural style.” The architects then search for re-usable patterns that include the VPEC-T dimensions.

### *VPEC-T and Externalization*

Externalization is the underlying IS trend toward ***ubiquitous information sharing and access to services***—where information and services are available to anyone or any machine, for any purpose. We see in the trend:

- *The breaking apart of the concepts of applications and databases to expose the business-meaningful parts of an Information System.*
- *Making tacit, human knowledge and behavior explicit.*
- *Integrating externally owned information sources and services of value to the Business Information System.*
- *Consuming and publishing business-meaningful events within and outside the enterprise.*

Externalization also invites management to consider whether there are existing services provided on the Web (such as Software-as-a-Service offerings like Salesforce.com or Google Apps) first, before they decide to implement services internally within the organization.

The simplifying, and technology-decoupling, nature of VPEC-T thinking supports this trend. The externalization of business and IT, which we discuss in greater detail in Chapter 5, is being achieved as



## *Information Systems and the Big Picture*

Focusing on information systems involves focusing on the behavior of the people involved, their motivations, the way they interact, their core Values, and the Policies that implement those Values. Just as the scope of information systems is larger than the IT solutions, the Values and Policies unearthed in information systems design can be used on a larger scale still. In many of the organizations that have tried it, VPEC-T has been adopted as a de-facto architectural paradigm, because the V and P dimensions are applied not only to the system in question, but also to many systems outside the scope of the original project. The approach, in this way, has a regenerative effect on IS thinking throughout the organization, and it gets easier to re-apply as you go on. The beginning of the second VPEC-T analysis can start with the Values and Policies identified in the first. In this way, VPEC-T analysis becomes additive and represents an *architecture of behavior* that supersedes the project. Thinking about VPEC-T in a big-picture way seems to have many benefits.

the systems we use involve more and more collaboration, more and more use of systems provided by external sources, and more and more do-it-yourself functionality. As the *how* becomes more pliable, the *what* becomes more important. VPEC-T helps address what solutions should be doing, how they can meet their goals effectively, and how to manage risks in an externalized world.

Because the scope of VPEC-T is always larger than the scope of a single information system (vertical application), adopting VPEC-T as a philosophy is the beginning of creating a lasting and reusable understanding of the information systems in an organization. The rest of the book illuminates all the various aspects of information systems and their importance to the adoption of IT-enabled change.

### VPEC-T: the Cartoon Version



#### Solutions out of Balance

Solutions created without proper input from the business side are inevitably driven by the concerns and fancies of the IT staff. *What* the solution should do to help the business is overcome by *how* the solution will be delivered.

The capabilities of existing IT infrastructure and applications, of vendor products such as enterprise business application software, or of services available over the Web (e.g., Software as a Service) determine the shape of the solution, not the business needs. The reason for this is that the business people lack a method and a language to capture the complexity of their requirements and express in business terms the details of what the solution must accommodate.

The result is that the solutions created are out of balance, as shown in Figure 1-3:

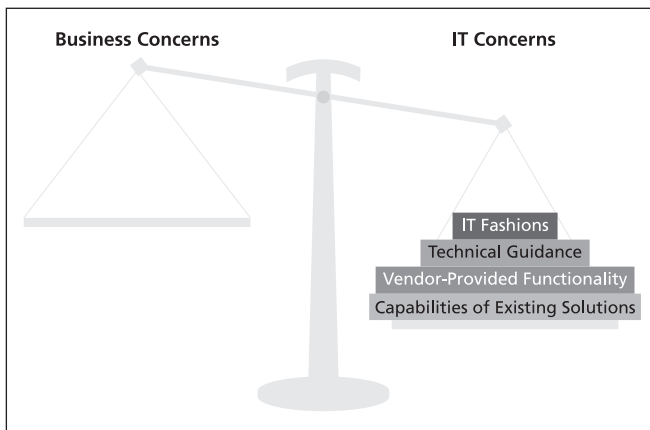


Figure 1-3: A Solution Out of Balance

A solution that is out of balance is one that creates a struggle for adoption. The business side does not find its needs met by the solution. Data must be entered, but everything seems like a lot of work for dubious value.

In the terms of our previous explanation, VPEC-T conquers the complexity that leads to this imbalance, and does so by supplying practitioners with information they can use, restoring balance.

## The Result of VPEC-T: A Balanced Solution

The result of applying VPEC-T is a balanced solution as shown in Figure 1-4. The IT department's reasonable concerns are now matched, but a much larger body of knowledge about key issues that should inform the shape and functionality of a new solution now exists. Business and IT architects can design solutions—making use of (for example) existing applications and infrastructure, new business application software, new infrastructure products, and/or services available over the Web—with a better understanding of the behavior of the people involved, the goals they are trying to meet, and the way that information flows.

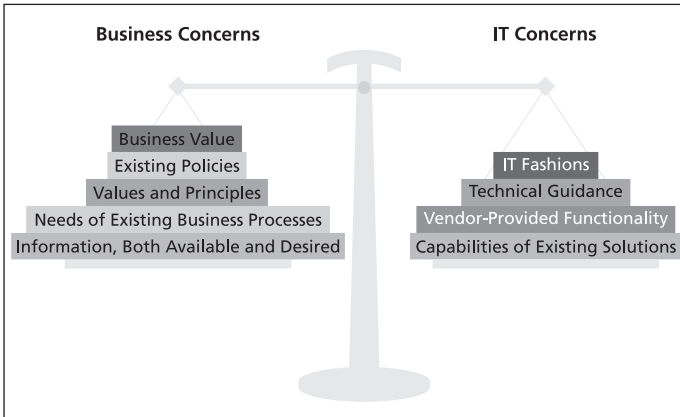


Figure 1-4: A Balanced Solution

## The Benefits of VPEC-T

While VPEC-T is a new concept, it has been developed by the authors in several different engagements to develop solutions in environments that faced intractable challenges. A growing number of practitioners

***Who should read this book?***

- *Business Leaders who are curious about how “systems” work*
- *IT Leaders*
- *Change Practitioners (IT and Business)*

Our big request is that you occasionally put down the book and visualize applying VPEC-T to situations familiar to you.

“We’d like to think this book will find its way to the CIO’s bookshelf—wedged firmly between *The Mythical Man-Month* and *The Tao of Pooh*”.

—The Authors.

in a variety of industries are starting to report that VPEC-T has the following impact:

- Decreases the risk of IT project failure,
- Highlights the people and organizational issues associated with IT adoption,
- Increases opportunities for innovation,
- Highlights the opportunities for shared IT-enabled services,
- Informs IS/IT strategies and road maps.

Organizations have found the VPEC-T approach and output useful when considering:

- Highly Federated business situations (e.g., International Supply Chains),
- Balancing Central control with Local freedom-to-act,
- Reducing IT Time-to-Market barriers,
- Developing Shared Services and IT Commoditization (e.g., SaaS) strategies,
- Developing a business-system model to take advantage of Service-Oriented Architecture and Web 2.0 technologies,

- Developing Semantic-Web strategies and new information models that combine tacit and explicit information,
- Developing Event-based technology strategies (e.g., RFID and BAM),
- Developing Managed Service Provision business models (e.g., Supply Chain intermediaries or SaaS Providers),
- Developing “Change-ready” IT strategies,
- Developing post-M&A IS/IT strategies,
- Developing customizable services to their clients without perpetuating “point solutions,”
- Dealing with complex interacting Systems of Value (e.g., Governments),
- Dealing with complex information privacy and protection concerns.



### *Putting this Book to Work*

While VPEC-T is fun to read about and even more fun to write about, the real pleasure comes from putting the framework to work. The authors and other practitioners find that, in everyday conversations, they are much quicker to realize that a dispute is, at its core, about Values, or that the real problem is that Trust has never been established.

Systems thinking is useful in itself and has many advocates, and the authors encourage anyone with any interest to expand their knowledge in this area. (Check out the annotated bibliography for the authors’ favorite books on the subject.) But you don’t have to take a course on systems theory to use VPEC-T. The next time you are in a conversation about how to solve a problem, try to identify the Values and Policies in play. What Events are triggering action? What exactly is the Content being exchanged? Is Trust or the lack of it helping or hurting?

So, to put it simply, we believe that focusing on *information systems*, rather than “the business” or “IT,” and accepting that people (and their behavior) and technologies play an equally important part in them, leads to a common understanding of what’s needed, what isn’t needed, and what will be adopted. Simple, really—and perhaps because it’s so simple, you might hear a little voice say, “Why bother with the rest of the book?”

The answer is equally simple: we just want to explore our thinking, examples, and possibilities with you. We have one straightforward purpose in mind—to get you to try it for yourself. Perhaps even now, why not consider a part of your business you’d like to transform, and from the perspective of the key participants, write down a few words each about the V, P, E, C and T. Table 1-1: The VPEC-T Dimensions on page 10 will remind you of the straightforward definitions for each if you need it. Trying it out it might surprise you.

When you do try it for yourself, we do hope you drop us a line. We’d love your feedback on the book and on “thinking” and using VPEC-T in your professional life. Go to [www.LIThandbook.com](http://www.LIThandbook.com)

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**Nigel Green** is fascinated by two things; the way people actually use IT and how well IT reflects real-world behavior. His list of favorite authors hints at his values; philosophers, economists, architects, physicists, anthropologists, entrepreneurs, technologists and systems theory thought-leaders are on that list. A business/IT translator for over 25 years, Nigel specializes in large organizations with complex and distributed operating models where he applies the thinking described in this book.

Nigel is an executive enterprise architect at Capgemini.

**Carl Bate** works with organizations helping them transform, applying equally people behaviour and information technology considerations. His values include team spirit, honesty, freedom and fun. Carl brings leadership to help businesses realize new possibilities in the world of “connectiveness” and business technology fusion surrounding us. A value creator, enroller and business/IT translator, Carl has worked as an advisor and line executive across multiple industries.

Carl, a vice president and CTO at Capgemini, is executive sponsor of 'Lost in Translation'.

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