

What should Businesses expect from IT?

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President

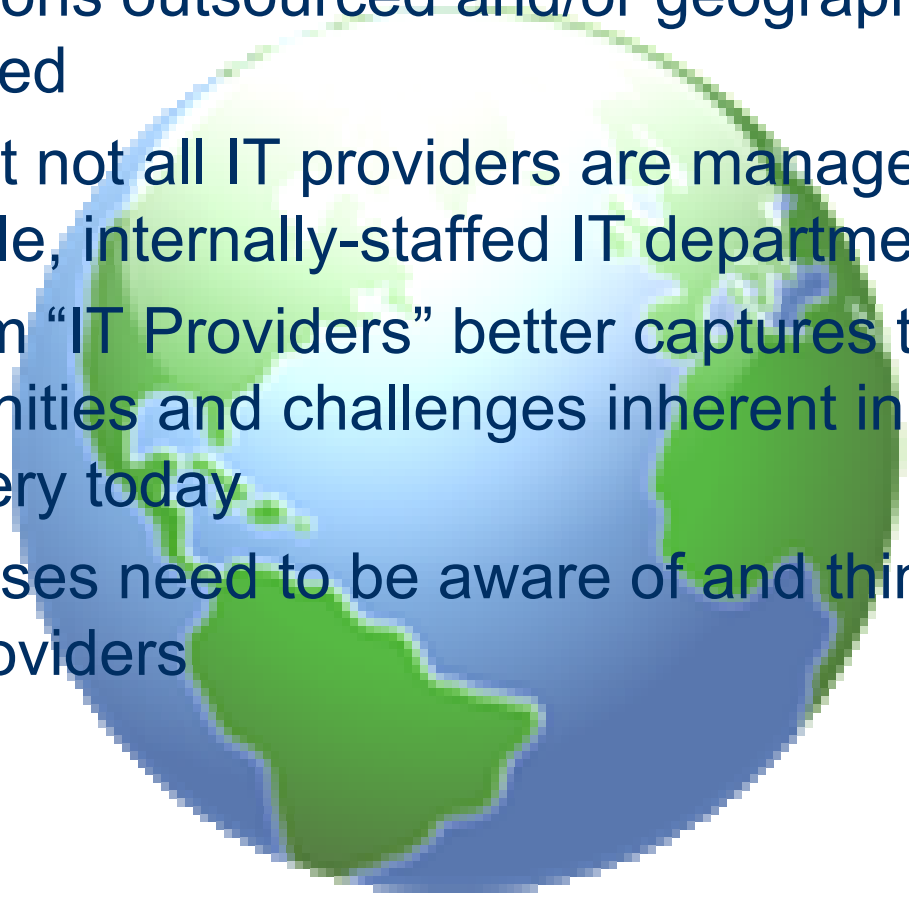
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Presentation Objectives

- Too often, IT projects and operations fail because business expectations are unrealistically high in terms of what can be achieved in a given time at a given quality and budget.
- And too often, IT providers have unreasonably low expectations regarding the same.
- What is lacking on both sides is a knowledge of what can be realistically achieved by combining a clearly prioritized set of business needs with well-established IT industry best practices.
- This presentation provides an overview of COBIT, ITIL and CMMI and explains how the three can work together to help address these issues.

IT Providers?

- IT functions outsourced and/or geographically distributed
- Most but not all IT providers are managed through the single, internally-staffed IT department.
- The term “IT Providers” better captures the opportunities and challenges inherent in enterprise IT delivery today
- Businesses need to be aware of and think in terms of IT Providers



What Should Businesses expect from IT?

- **Great service at a low cost?**
- **Better service that the competition gets from its IT providers at a lower cost than the competition pays for its IT?**



Six Key Concepts

- **Information for Decisions**
 - How fast can I run? How fast can they run?
- **Value for Money**
 - no need to pay for a Ferrari if a pair of sneakers will do the job
- **Risk Management**
 - Is there one bear or two bears? Having those sneakers ready!
- **Process**
 - Don't trip over untied laces
- **Responsiveness**
 - Does the situation demand that I run? Do I have time to put on my sneakers before the bears reach me?
- **Innovation**
 - What if I am the slowest runner next time even with my sneakers on?

Estimation Tools such as SEER help with all these

Information for Decisions

- If you cannot measure, you cannot manage
- The business needs clear, concise, relevant information from the IT providers in order to understand whether all of its other expectations are being met.
- Unfortunately, IT providers tend to be much better at generating data than generating information.
- Any discussion must start with identifying the information needed to inform the business if its strategic and tactical goals are being met.
- This should lead to a discussion about what operational performance measurements for the IT providers need to be monitored
- Finally, a set of measurements are required to give the business information about whether the current supplier of IT services is providing value for money compared to their own previous performance and, ideally, the performance of those providers that represent the businesses other options.

Information for Decisions - GQM

- Goal-Question-Metric (GQM) technique:
 1. Develop a set of corporate, division and project business goals and associated measurement goals for productivity and quality.
 2. Generate questions (based on models) that define those goals as completely as possible in a quantifiable way
 3. Specify the measures needed to be collected to answer those questions and track process and product conformance to the goals
 4. Develop mechanisms for data collection
 5. Collect, validate and analyze the data in real time to provide feedback to projects for corrective action.
 6. Analyze the data in a postmortem fashion to assess conformance to the goals and to make recommendations for future improvements

Value for Money

- CEO should ask their CIO “Do you view IT as an expense or an investment?”
- Investment?
 - Is IT part of what makes your business competitive?
 - Is it a strategic differentiator?
 - Lower tolerance for failure of mission critical system and, hence, higher IT costs.
 - Higher positive impact of IT innovation on your business => higher tolerance for IT experimentation => more failure => higher IT costs.
- Expense?
 - If IT is a “necessary evil” in your business then you can really focus on getting satisfactory services for the lowest possible cost with some acceptance of risk.
- Both?
 - Some environments at some times where IT viewed as an investment and others viewed as an expense.
 - These will change over time
 - Businesses need a clear understanding of the strategies for different parts of their current portfolio.

Risk Management – The problem

- CEO's and all senior managers hate surprises.
- The business has a right to expect no surprises from its IT providers.
- The only way to avoid surprises is to engage in a dialogue about risk management.
- In IT, there is a certain mystique about the risk management process area and it is generally ignored.
- The IT industry is bedeviled by an incomprehensible optimism, indefensible in the light of the industry's track record for on-time and on-budget delivery that parallels the theaters' "It'll be alright on the night!"
- This optimism and unwillingness to even think about risk management is interesting in that it runs counter to the most common IT reaction to even the most simple request

Risk Management – The environment

- The interest being taken in IT by the external auditors of the organization especially two broad and related risks:
 - An IT operations failure can seriously disrupt or destroy an organizations ability to operate and/or its reputation with its customers.
 - One of the most likely causes of an IT operations failure is the introduction of new software.
- External auditors are now working their way back along the SDLC processes seeking reassurance from evidence of auditability and best practices.
- People risk
 - A lot of IT capital is tied up in the businesses intellectual property that is in people's heads.
 - All too easy to view staff as fungible "resources."
 - In most organizations, there are key individuals whose knowledge and expertise is the difference between success and failure in the short- and medium-term.
 - IT providers must be required to perform the same risk management planning for their people as they do for the hardware!
 - This is a particular risk during merger and acquisition events.
 - The business should expect a succession plan for, and from, the CIO.

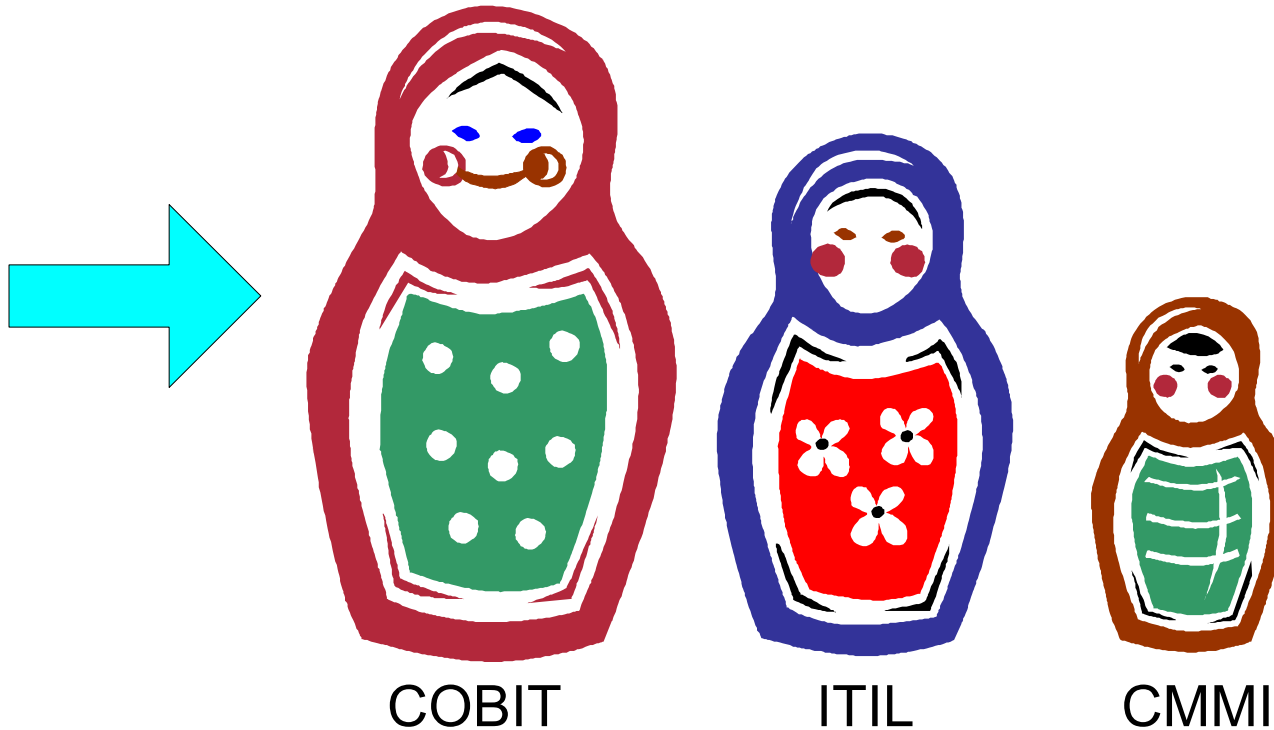
Risk Management – The approach

- It is necessary for businesses to drive their IT providers to enumerate and quantify all possible risks.
- Businesses should expect each risk to be accompanied by one or more mitigation strategies with associated costs.
- Business should then choose the risk management strategies they can tolerate in terms of consequences and expense.
- Essentially, businesses have the right to expect IT providers to be prepared for different failure scenarios by appropriate forward thinking and planning.
- Monitoring of key metrics is an essential part of risk management.
- Businesses should not expect to understand or even receive the data from the monitoring systems but they should expect their IT providers to set performance thresholds that will give early indication of a possible failure situation in the future.
- The appropriate time span for “future” is the time required to have the option of taking corrective action.

Process

- Defined processes ensure repeatability and provide a springboard for continuous improvement.
- Most businesses do not have the time or the knowledge to create best practices for the management of IT.
- Fortunately, much of the work of best practices capture and codification has been done already.
- Businesses should view the implementation of process by their IT providers as a huge step forward in risk management.
- Through the implementation of industry recognized processes, businesses are benefiting from not making the mistakes that other have made to find out what constitutes best practice.
- Your auditors will be much easier people to satisfy if your IT Providers implement these processes BUT you need to implement your own internal audit capability.
- Three major sets of IT Best Practices:
 - COBIT, ITIL and CMMI.

Process – Best Practices



Process – COBIT™

Control Objectives for Information and related Technology

- COBIT is a set of best practices (framework) for information (IT) management created by the Information Systems Audit and Control Association (ISACA), and the IT Governance Institute (ITGI) in 1992.
- COBIT provides managers, auditors, and IT users with a set of generally accepted measures, indicators, processes and best practices to assist them in maximizing the benefits derived through the use of information technology and developing appropriate IT governance and control in a company.
- COBIT should be considered as a governance and control framework that IT providers must comply with.
- The COBIT mission is “to research, develop, publicize and promote an authoritative, up-to-date, international set of generally accepted information technology control objectives for day-to-day use by business managers and auditors.”
- Managers, auditors and users benefit from the development of COBIT because it helps them understand their IT systems and decide the level of security and control that is necessary to protect their companies’ assets through the development of an IT governance model.

Process - COBIT

Plan and Organize

- PO1 Define a Strategic IT Plan
- PO2 Define the Information Architecture
- PO3 Determine Technological Direction
- PO4 Define the IT Processes, Organization and Relationships
- PO5 **Manage the IT Investment**
- PO6 Communicate Management Aims and Direction
- PO7 Manage IT Human Resources
- PO8 **Manage Quality**
- PO9 **Assess and Manage IT Risks**
- PO10 Manage Projects

Acquire and Implement

- AI1 Identify Automated Solutions
- AI2 **Acquire and Maintain Application Software**
- AI3 Acquire and Maintain Technology Infrastructure
- AI4 Enable Operation and Use
- AI5 **Procure IT Resources**
- AI6 **Manage Changes**
- AI7 Install and Accredite Solutions and Changes

Deliver and Support

- DS1 Define and Manage Service Levels
- DS2 Manage Third-party Services
- DS3 **Manage Performance and Capacity**
- DS4 Ensure Continuous Service
- DS5 Ensure Systems Security
- DS6 **Identify and Allocate Costs**
- DS7 Educate and Train Users
- DS8 Manage Service Desk and Incidents
- DS9 **Manage the Configuration**
- DS10 Manage Problems
- DS11 Manage Data
- DS12 Manage the Physical Environment
- DS13 Manage Operations

Monitor and Evaluate

- ME1 **Monitor and Evaluate IT Processes**
- ME2 Monitor and Evaluate Internal Control
- ME3 Ensure Regulatory Compliance
- ME4 Provide IT Governance

SEER for
IT

SEER for
Software



Process – ITIL™

Information Technology Infrastructure Library™

- A set of best practices built around a process-model based view of controlling and managing IT operations.
- ITIL is considered one set of best practices in the more general field of IT Service Management (ITSM).
- It is important to remember that ITIL is a truly a library of books.
- The “architecture” of ITIL can be thought of as the structure imposed by the titles of the books that describe the best practices

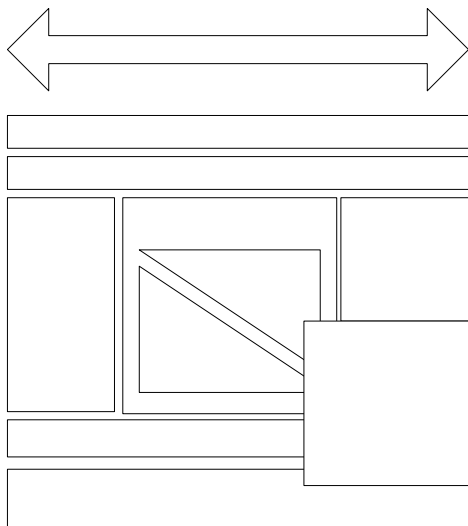


Process – ITIL v3

- ITIL Version 2 focused on processes (described later in this chapter), Version 3 focuses on business value
- The shift in focus is an attempt to improve the linkage between the business needs of the organization and the IT operational processes that enable them
- The Five Books are oriented around the concept of a Service Life Cycle:
 - Service Strategy
 - Service Design
 - Service Transition
 - Service Operation
 - Continual Service Improvement

Process - ITIL

Version 2

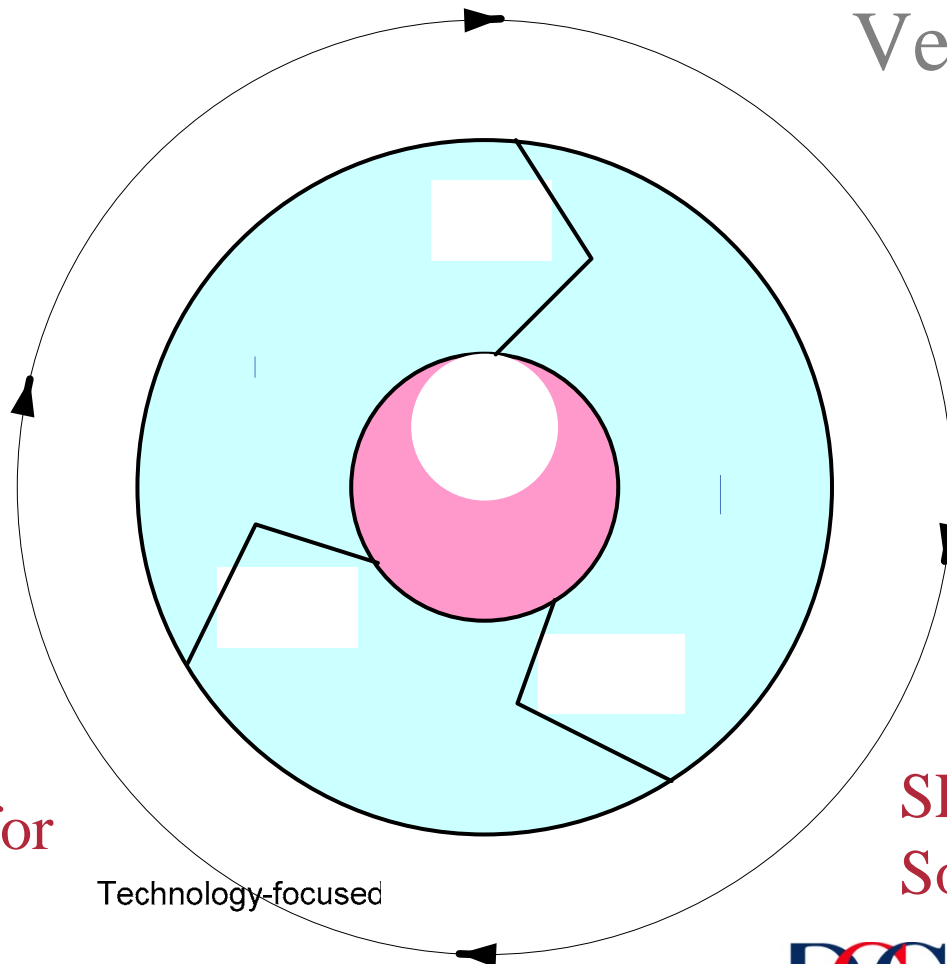


SEER for

Business-focused
IT

Technology-focused

Version 3



SEER for
Software



Process – CMMI™

Capability Maturity Model Integration for Development v 1.2

- A capability maturity model typically defines five levels of maturity that an organization can strive to achieve and, more importantly, sustain. Level 1 is the lowest level and the easiest to achieve although its value to an organization is low. Level 5 is the highest level.
- The best practices captured in CMMI are focused on systems and software engineering.
- CMMI provides a framework for the expectations that a business should reasonably have for the software development activities of its IT providers.

Process – CMMI Levels and Categories

SEER for
Software

<i>Process Area</i>	<i>Category</i>	<i>Maturity Level</i>
Requirements Management	Engineering	2
Project Monitoring and Control	Project Management	2
Project Planning	Project Management	2
Supplier Agreement Management	Project Management	2
Configuration Management	Support	2
Measurement and Analysis	Support	2
Process and Product Quality Assurance	Support	2
Product Integration	Engineering	3
Requirements Development	Engineering	3
Technical Solution	Engineering	3
Validation	Engineering	3
Verification	Engineering	3
Organizational Process Definition +IPPD	Process Management	3
Organizational Process Focus	Process Management	3
Organizational Training	Process Management	3
Integrated Project Management +IPPD	Project Management	3
Risk Management	Project Management	3
Decision Analysis and Resolution	Support	3
Organizational Process Performance	Process Management	4
Quantitative Project Management	Project Management	4
Organizational Innovation and Deployment	Process Management	5
Causal Analysis and Resolution	Support	5

Process – CMMI Business Drivers

- Three business drivers for seeking CMMI for a software development group:
 - It's the right thing to do to develop software effectively, efficiently and economically to gain competitive advantage.
 - One or more clients are insisting on it as a contract condition
 - The organization has specific problems in software development that need to be addressed.
- For the first two drivers, a “staged representation” is generally chosen because it is simple for clients to understand from a “level playing field” perspective but raising an organization to a maturity level provides a limited granularity of investment choice for a business i.e. are we going to invest what it takes to get to level 2, 3, 4 or 5?
- The “continuous representation” allows the business to focus it's investment on the areas where improvement is most needed and the return on investment is most evident.

Responsiveness

- The business must expect responsiveness from IT to three key stakeholders:
 - Business customers
 - The best form of IT responsiveness is invisibility. The technology should never be the problem and, if it is, the IT providers should get the IT out of the customers' eyes as quickly as possible.
 - Business users
 - IT providers should be expected to share the urgency of the business need
 - IT providers should establish different processes for engaging with the business users. These engagement approaches include participation in requirements gathering, training, support and easy accessibility
 - Business managers
 - IT Providers must be expected to provide information not data.
 - IT providers must be able to report to business managers in context-relevant ways to enable business decision making.
 - IT providers should be required and able to participate in business planning and provide responsiveness leadership to offer the business IT-based opportunities for business growth or cost savings

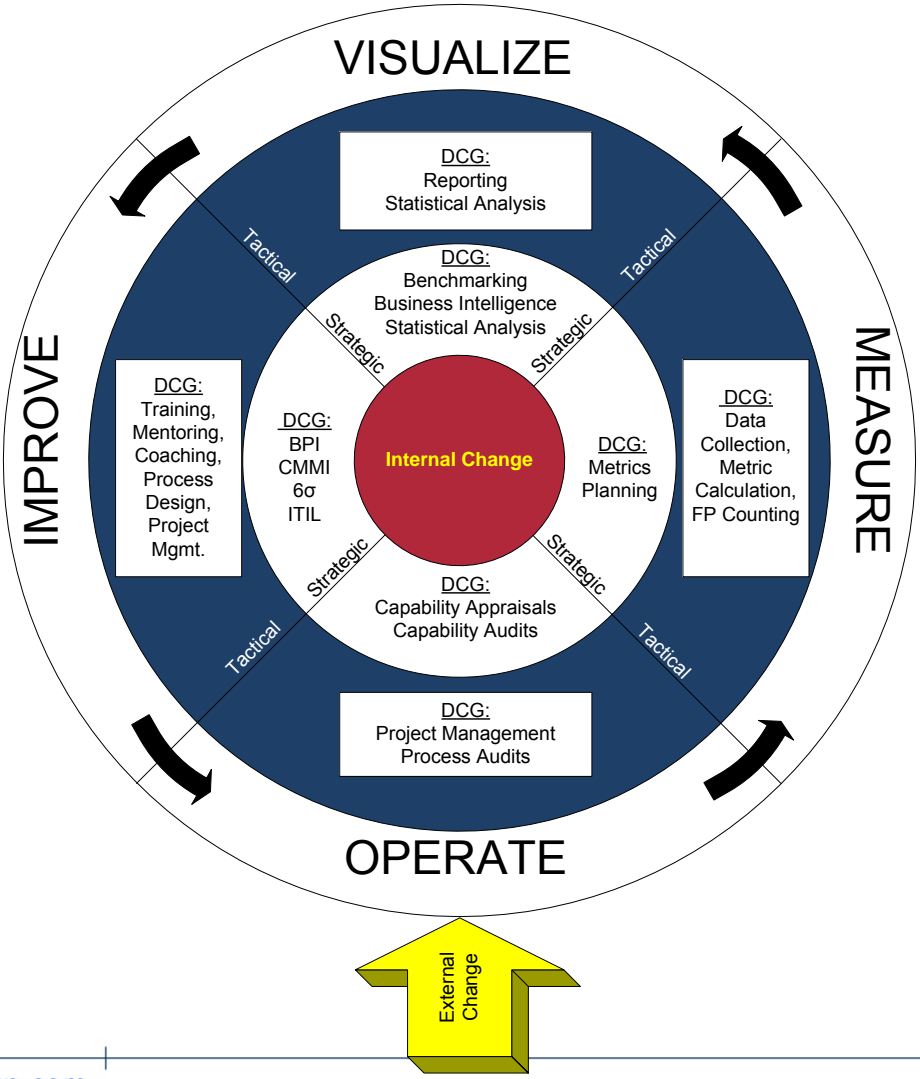
Innovation – driven by IT

- Innovation tends to be thought of as the “introduction of something new”.
- We prefer the “introduction of something new that improves measured performance in desirable ways”.
- In IT, an improvement in the measured performance of one parameter may be at the expense of a reduction in the measured performance of other parameters.
- Businesses need to be mindful that IT providers may be offering innovation on a narrow front. The bigger picture is always needed.
- With a nod to the “Value for Money” slide above, businesses have a right to expect innovation from IT.
- Innovation in and through IT has become such a norm that businesses sometimes forget to think about it in that way - New software or new operating systems or new hardware can become a “pain” that we would rather not deal with – “innovation for innovations sake.”
- Businesses must not forget that the improvement-enabling power of IT endures.
- That any manual process is a candidate for automation is so obvious that it should not need stating but when did you last look around your business for manual processes?

Innovation – controlled chaos

- The business should expect creative energy from their IT Providers e.g. a new idea to make millions, a better, cheaper way to service customer bug fixes or the CIO proposing to save a fortune by combining two different business units' similar needs. These all boil down to finding new ways to deliver value for money.
- IT providers are uniquely qualified to identify potential applications of new technologies to old problems and potential applications of all technologies to new problems.
- Business need to create an environment in which their IT providers can contribute thought leadership, business creativity and process innovation coupled with sound business cases. “Sound” varies but it should not exclude big ideas.
- Return on investment is crucial but the definition of “return” should include consideration of broader value.
- One way to enable but manage innovation in IT, and to make unintended consequences a positive force, is to use some form of Agile Methodology using the principles of the Agile Manifesto.

Summary – Value VisualizationSM



Questions?

- For more information:
 - “The Business Value of IT: Managing Risks, Organizing Performance and Measuring Results” by Michael D. S. Harris, David Herron and Stasia Iwanicki (Auerbach, 2008)
 - www.davidconsultinggroup.com