

IT BUSINESS INTELLIGENCE

ITBI™

OVERVIEW



SMT Data
Specialists in IT Business Intelligence

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The CIO's dilemma

When the CIOs look at their own data centers or at the constantly growing list of demands from the business side of the organization, the picture they get is one of complexity. The number, size and complexity of traditional data centers is growing dramatically. Open systems under the CIO's control may number in the tens of thousands, while mainframe systems they're responsible for are expected to handle growing workloads. It becomes almost impossible to gain an adequate overview of this vast conglomeration of computers - or even to ensure that they deliver exactly what is needed to maintain the competitive edge of the company. This situation challenges anyone's ability to manage efficiently and effectively - there just isn't the transparency needed to do so. Aggravating the problem is the fact that expert skills are becoming harder and harder to recruit.

This is the CIO's dilemma: Budgets are being cut or at best kept flat, the computing environment is becoming increasingly complex and ever-increasing, business and user requirements are constantly growing while the size of the technical team is often being reduced.

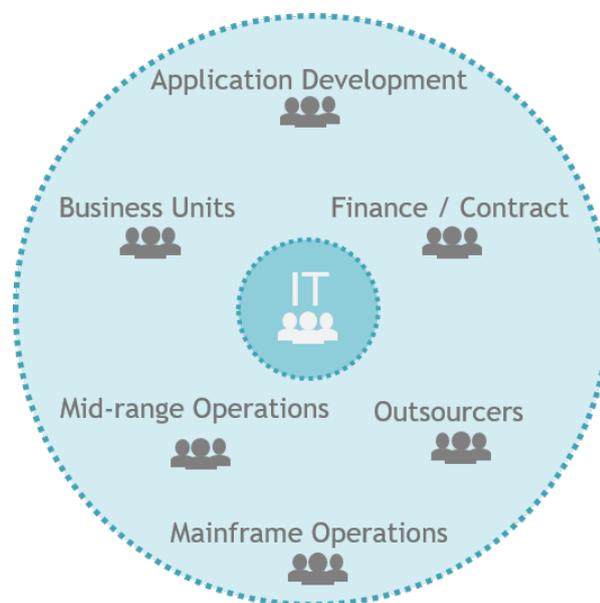


Fig 1: Getting the information advantage by having "One Truth" shared reporting for dialog with multiple outsourcers and internal stakeholders

Many turn to datacenter and cloud outsourcing to save money and to leave the complexity of the task to someone else. But this solution might reduce transparency even further. Responsibility for the scarce mainframe technical staff as well as open systems support now rests with the outsourcer. Outsourcing can also make positive disruptive processes like DevOps more difficult to implement. Meanwhile, the CIO, CFO and CEO face rising IT resource consumption, divorced from the fundamentals of the business, and often find themselves with little cost transparency, and no means to effectively contain the rising demand for processing capacity.

This begs the question: How does IT keep the business running, support new services, and cut costs at the same time? And what solutions are out there to help make this happen?

Typical solutions

Consulting

One solution - particularly for IT organizations that lean heavily on outsourcing - is consulting. There are many excellent (and many more not excellent) consulting firms in the IT ecosystem that provide consulting services for precisely this type of challenge. The problem with an outsourced solution like this is that you may not actually receive the transparency that you hoped for. With consulting help, you may actually run your IT systems more efficiently and effectively - but how do you measure the efficiency/effectiveness of your consulting partners? Do they have the same high level of expertise in dealing with both mainframe and distributed system environments? Further, your ongoing reliance on a pure consulting solution of this nature means an ongoing expense with which, once again, you have limited transparency.

Monitoring tools

Another more common solution is to rely on monitoring toolsets to provide transparency into your IT spending, and to help you to run your IT systems more efficiently and effectively. Toolsets of this type should give you some sort of transparency through their reporting and presentation components. In fact, many will provide an excellent look into specific parts of your system. However, getting technical information dumps may or may not help you - do they provide a link between your technical data and your business usage? Monitoring tools are by design very technical and do not include a financial capacity perspective. Very few are capable of providing equally valuable information about both your distributed systems and your mainframe systems. Fewer still can provide you with a historical perspective on business / financial usage.

Bundled tools

A third solution is to use a group of products - sometimes products that may be preinstalled on some of your systems - that may individually be excellent tools for what they are designed for, but are actually a group of separate products that are not well integrated, and are very difficult to install, configure and use. In many cases bundles, will also be very limited - for example, they may be effective for distributed systems information only, or mainframe systems information only. In most cases, they are not capable of giving you what you need - a well ordered and comprehensive view into the resource usage and spending taking place in your data center.

An IT business intelligence solution for multi-platform IT data center and cloud environments

An IT business intelligence solution for multi-platform IT data center environments can provide transparency by mapping IT resource consumption and IT costs to business activities. Such a solution can give you the resources you need to help manage your data center more efficiently, and to link the use of IT directly to the company's bottom line and development potential. This is achieved through software solutions that provide complete transparency into the interaction between IT and business operations.

A solution like this can also deliver on the monitoring of outsourcing providers, allowing you to minimize outsourcing costs. You can also use it to link application development to IT operations in terms of demand and cost, and to more effectively consolidate assets and balance load for concerns like virtualization, M&A, etc.

A common ground between IT managers and business managers

IT and business need to understand one another; a common language is needed. And that is what an IT business intelligence solution for multi-platform IT data center environments does. It is a clear window through which you can define a common language for business and IT. It creates a common ground between people who talk in terms of terabytes per second and those who prefer millions of dollars per quarter. Presented in a simple and manageable way, it enables a meaningful dialog to take place.

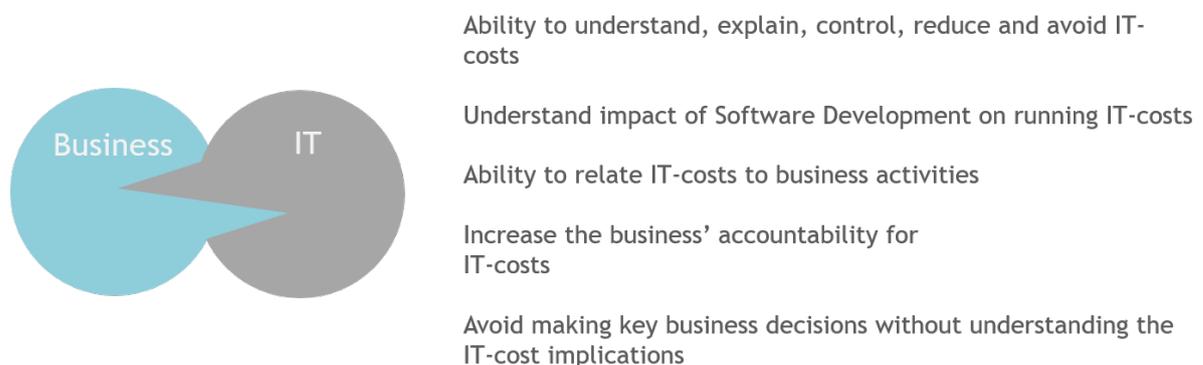


Fig 2: TBI gives ability to understand, explain, control, reduce and avoid IT-costs

The solution provides transparency in the relationship between business and IT, thus reducing the risk of distancing the CIO from the rest of company management. Most importantly, it gives companies the ability to exchange complexity for transparency, ensuring efficient and effective IT management. This can also deliver a competitive edge.

Most companies struggle to translate IT spending into higher revenues or lower non-IT operating expenses. And, despite the fact that IT costs often accounts for a significant part of a company's budget, conventional BI systems tend to lack real substance within this area. CIOs need tools that put the focus on IT-related information.

IT systems generate a wealth of technical data describing anything from hardware utilization to user activity and service levels. A mainframe has more than 100,000 points of measurement and a single Windows server more than 2,500, all recorded continuously. Even medium-sized IT installations register many million points of measurements every single day, primarily used by operational monitors and alarms.

That same data can also be transformed into useful information at all organizational levels. This transformation requires massive data reduction and refinement and the combining of data from different sources in order to create new information. A tool that includes more than 200,000 active sets of rules and policies for reducing and refining standard IT measurements - and a user-friendly GUI to create even more for each individual customer is what is needed.

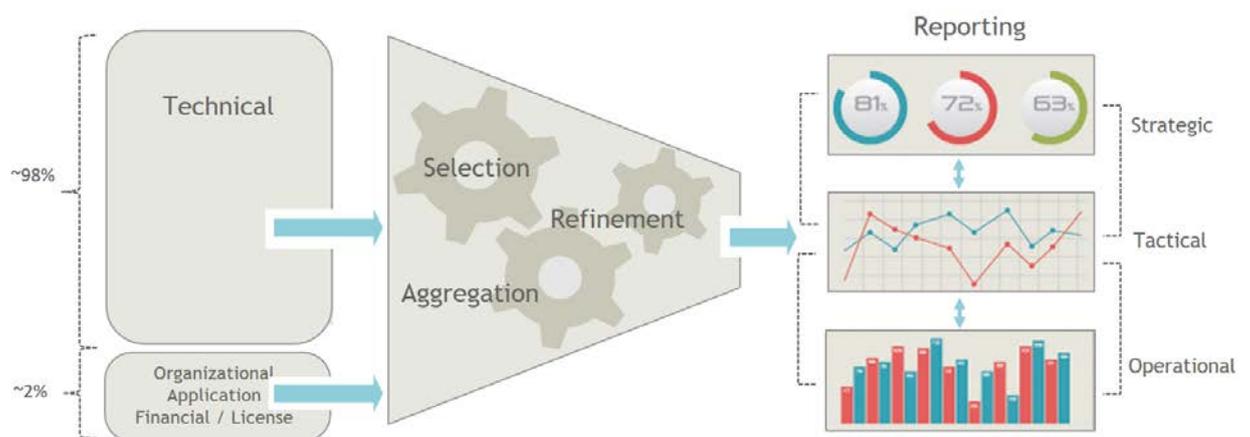


Fig 3: Refining standard IT measurements into business-relevant information

Multi-platform IT business intelligence

Since most large data centers contain both mainframe and midrange servers, any effective IT business intelligence solution for multi-platform IT data center environments must, by definition, provide useful IT intelligence on both platform types.

Mainframe systems IT intelligence

Mainframe systems are often managed in a silo - separated from the rest of the IT organization, which makes managing costs more of a challenge than it is for your distributed systems. Operating costs can - and often do - get out of control before managers even realize it is happening. This makes mainframe optimization all the more important. Optimization is an iterative process, getting you closer and closer to an optimal configuration. A concentrated one-off effort can result in significant savings, but ensuring that optimization is an ongoing discipline is even more beneficial and ensures sustainability of savings.

Using a multi-platform IT business intelligence solution, data can be easily analyzed either using standard reports/analysis or by developing new reports using an integrated end-user BI tool. Technical reporting is available out-of-the-box, and creates immediate value by identifying capacity, performance and demand optimization potential. It is not uncommon for such 'low hanging fruit' to result in 10-15% savings in IT operational expense.

Technical information such as LPAR, job or transaction names can be mapped to business dimensions such as the organizational unit owning that component or the application to which it belongs. This mapping can often be extracted through existing naming conventions with very little effort— a complete mapping of all units of work is not needed. As with everything else in optimization, the focus is on understanding the units of work with the highest costs.

The technical measurements can also be enriched with cost information such as a cost per MSU, MIPS, or CPU seconds (or cost per TB of disk space). With a solution like this, mainframe optimization need no longer to be identified, planned, prioritized and executed by technical staff only—it can be available to CIOs and line-of-business managers equally.

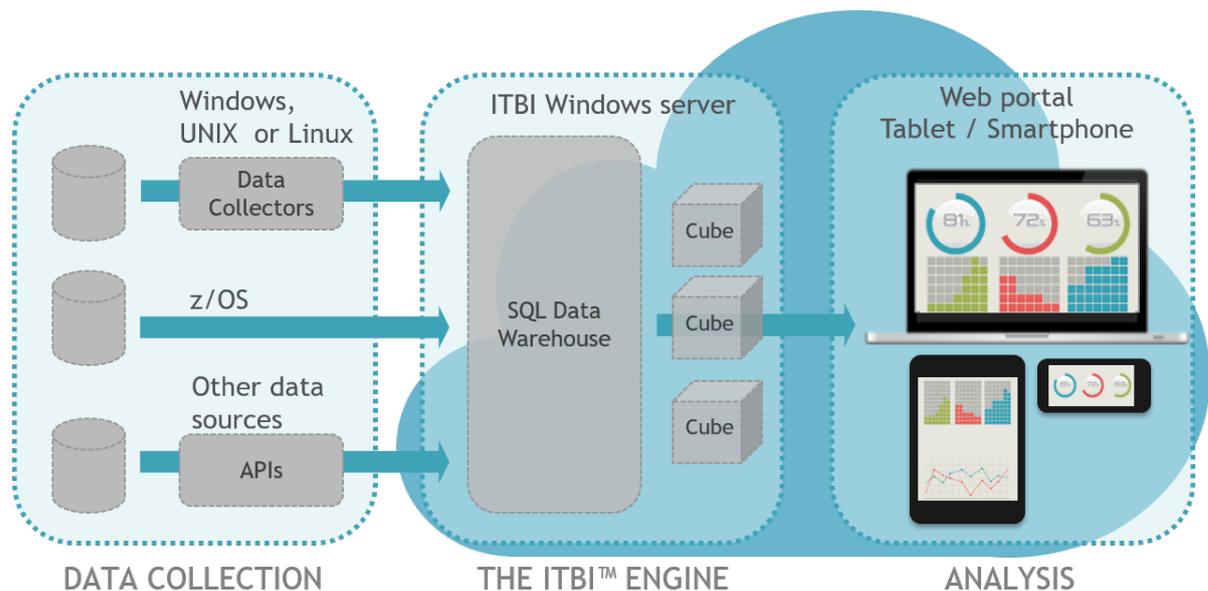


Fig 4: Product Architecture - Automated data collection, processing and creation of standard BI-style information

Distributed systems IT intelligence

Monitoring tools tend to ensure that the under-configured servers are dealt with, but usually no one is looking at the over-configured servers. Virtualization has led to the perception that over-allocation of capacity is free because the hypervisor and thin provisioning should ensure that the virtual server doesn't actually get more capacity than it needs. But the reality is more complex and not very transparent. Software costs, for example, are often driven by allocated virtual capacity. Installations that have outsourced their operations or moved to the cloud are usually paying for allocated virtual capacity, and the outsourcer or cloud provider is harvesting the benefits of virtualization. Even for installations that own the hardware and license software based on the physical installation, rightsizing virtual servers has significant benefits.

Like optimization on the mainframe, rightsizing servers is an iterative process, getting you closer and closer to an optimal configuration. And again, a concentrated one-off effort can result in significant savings, but ensuring that rightsizing is an ongoing concern is even more beneficial and ensures sustainability of savings. Ongoing rightsizing can create large savings in connection with hardware refresh, DevOps, infrastructure integration, outsourcing, software license management and cloud.

With the right tools, organization and processes, and with a relatively small amount of time and effort, rightsizing can save a large IT organization millions of dollars per year in operational and capital expense. The rightsizing opportunities in most installations are big and clear cut. The low hanging fruit are easily identified with this solution even without knowing all the technical details or understanding the full complexity of the cost model. A multi-platform IT business intelligence solution can help ensure that these efforts are successful.

Transparency and presentation

The collected capacity and performance information is stored into a flexible transparency grid, which is designed for easy addition of company-specific information regarding which business unit is using system resources and for which activities, as well as financial budgets. This combination of data sources transforms the technical data into business-related information, which is made available to IT and business users through an advanced state-of-the-art Business Intelligence reporting tool. Accessed via a browser or a mobile device, it provides dashboard-based overview information along with visual insight through drill-down analysis.

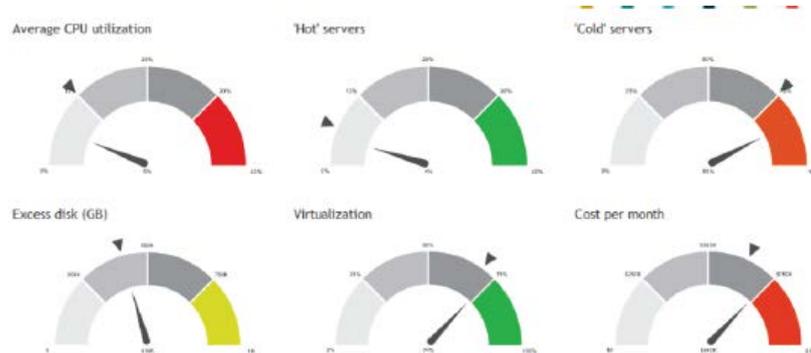


Fig 5: IT Business Intelligence KPI dashboards

This type of reporting and analysis will be familiar to users of conventional business intelligence systems. With the right combination of out-of-the-box standard reports and individually customized reports, the solution provides a solid and manageable foundation for a productive dialog between business and IT. This is made possible because both IT and business management will have the same set of data points and interpretations to work with, allowing decisions to be made based on facts.

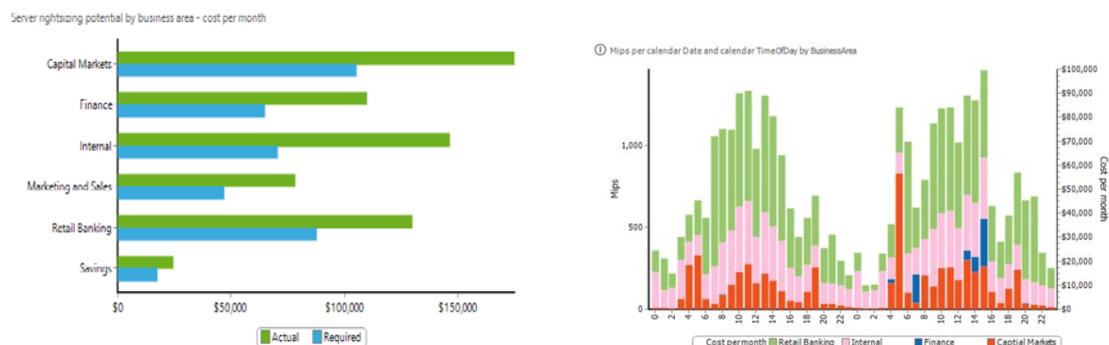


Fig 6: IT server and mainframe resources used by business units

The following transparency and insight is possible:

- Operational staff and DevOps can better understand cost drivers and identify related optimization and rightsizing potential
- IT management is provided with information for decision making and for understanding and conveying the business value of IT
- Business management receives information about IT service and costs by system and department, making it easy to optimize business demand and user behavior
- Procurement is supported in its efforts to plan for investments and budgets as well as to distribute IT costs across different business areas according to IT usage
- IT operations (senior technicians and middle management) receives the necessary information to perform tasks within the areas of ITIL's IT Service Delivery
- Managers responsible for applications within the development community can easily spot growth or service threshold violations within their area of interest

Cloud or on-site delivery

The solution can be delivered by a cloud-based or on-site Windows server that receives technical performance and capacity data from your mainframe systems, your distributed Windows and Linux servers, as well as other elements of your IT installation such as storage and applications. Access to that data is provided through an advanced Business Intelligence reporting tool.

This is a subscription based (monthly/yearly contracts) service - the subscription costs can easily fit into existing IT operational budgets without the need for capital spending.

Conclusion

Multi-platform IT Business intelligence creates complete transparency in the relationship between IT and business. And in the process, it not only facilitates vast savings and huge leaps in efficiency. It also builds a common language between people who speak in terabytes per second and those who speak in millions of dollars per quarter. It ensures that you run at optimal cost by taking into account historical data, allowing for better planning, forecast and budgeting. The time for practical and effective cost optimizing multi-platform data centers has arrived; and it is time to embrace it.

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