

WHITE PAPER

Achieving Sustainable Compliance Through Technology: The Key Role of the CIO

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IDC OPINION

With the onset of Sarbanes-Oxley in addition to current legislation, such as CFR Part 11 for Life Sciences or Global Trade regulations, compliance is posing larger challenges to IT than ever before. Certainly IT has always been the enabler of solutions to support compliance efforts such as statutory reporting. However, these current regulations require not only that IT supports end-user compliance processes, but also an infrastructure that guarantees information protection, privacy, and security. In the face of these challenges, the IT mandate is still to give the business the agility to respond to ongoing changes, such as fluctuations in customer demand and new tactics by competitors. The good news is that from an IT platform perspective, the requirements for compliance provide a sound platform for doing business, and many current investments, while seemingly reactive, make long-term sense. Regulations are just another aspect of doing business that changes on an ongoing basis. An IT platform that is capable of monitoring events, integrating information from multiple sources, providing greater degrees of business process automation, and preserving an audit trail of activities and records is foundational for IT's ability to enable dynamic business processes as well as good governance. SAP NetWeaver is an example of such a platform, designed to support dynamic processes for an agile business while managing compliance requirements.

IN THIS WHITE PAPER

The need to address regulatory compliance highlights the need for a secure and dynamic process and information integration platform supporting applications that drive adaptable business processes. This paper considers the implications of this model and how SAP, via its compliance solutions and NetWeaver platform, is positioned to support these requirements.

SITUATION OVERVIEW

The Compliance Landscape: The Challenge for IT

- ☒ Compliance requirements are evolutionary. They often begin with a mandate to leverage the existing IT infrastructure. Then as regulations become more prescriptive, risks of noncompliance are identified and new IT investments increase in priority. This continuing process presents many challenges: Business executives are asking that IT be an enabler, rather than an inhibitor of change. Yet IT is challenged to implement efficient applications that are also flexible. From a compliance perspective, the applications should be easily changed in response to competitive or regulatory changes. Yet IT must ensure that this flexibility does not pose a compliance risk. .

- ☒ Extending the range of automation beyond back-office and customer-facing transactions to the decision-centric processes (e.g., revenue recognition, portfolio management, credit evaluation, evaluating compliance risk).

- ☒ Broaden access to and retention of structured and unstructured data, and ensure that only those authorized by their roles and responsibilities can view or update relevant information. Until now, structured and unstructured information management have been separate initiatives in organizations.

- ☒ Merging the security requirements of compliance with broader business continuity plans that do not disrupt innovation.

IT needs to balance what seem in the near term to be contradictory requirements. The key to justifying IT investments is to look at the broader goal of providing a platform that can support the ongoing changes to the activities, policies, and processes of an organization. This paper focuses on the challenge of keeping IT systems aligned with the ever-increasing number of information-centric compliance and business initiatives, capable of responding to changes caused by other factors, such as internal reorganizations or new competition.

Are these new challenges? That's not really the case. IT has always been in the business of implementing systems that manage information and automate business processes, even though processes are rarely static. Moreover, business process automation along with data stewardship, two of IT's charters, are keys to successfully meeting compliance requirements. But in the face of current compliance challenges, effectively managing multiple priorities plays a key role in mitigating risk for the organization.

Achieving Sustainable Compliance: the Role of Technology to Integrate People, Processes, and Information

No matter which legislation is at issue, compliance involves the integration of people, processes, and information:

People

In order to comply, people need to understand the legislative policies that dictate the actions and processes they must complete, and integrate these into their daily jobs. But to have people acting as manual integrators is fraught with error and risk. Technology can create and automate processes that cross existing applications, which are automated and drive the completion of compliance activities. Technology can support the ability to push relevant information out to users. Technology can be used to automatically prompt for documentation to be cataloged, stored for audit purposes, and archived. An example of this would be the accounting journal entry process. Users record journal entries in general ledger systems and typically keep documentation in the file drawer or a computer file, which functions as the archive. This information may get accessed during the yearend audit. Under SARBOX, this process needs to be tightened up significantly. Technology can prompt users to attach documentation during this process or those like it, automatically creating more compliance records of the organization that are auditable and consistently managed from an IT perspective. The ability to comply depends many times on the employee's ability to exercise judgment within the context of their jobs and make decisions accordingly, which is dependent on the information they have at hand and the timing of their individual activities as part of a larger process. Automation makes this job easier.

Technology provides the support knowledge workers need when implementing a compliance strategy. For example, an enterprise portal incorporates:

- ☒ **Role-based user administration.** Maps user access rights to view and/or update information according to their roles in specific compliance processes.
- ☒ **Knowledge/content management software.** Helps manage the information assets of the organization, whether driving corporate policies and procedures that incorporate compliance mandates out to users, or collecting and retaining key files and documents from users that represent corporate records.
- ☒ **Collaboration.** Workflow, alerts, and report publishing can connect processes and push information out to those who need it and keep processes that require multiple steps and employees on track. This is a first step in enforcing compliance for some companies.

Many organizations use portal capabilities to educate large numbers of employees on corporate policies, procedures, and the impact of legislation such as Sarbanes-Oxley (SARBOX). Under SARBOX Section 404, the certification of internal controls requires up to 10% of the workforce to be involved in internal control evaluation processes. Educating these knowledge workers and supporting the documentation of internal control evaluations can be achieved by implementing compliance applications that incorporate a role-based dashboard that drives processes knowledge management, and collaborative capabilities.

Processes

Compliance initiatives can be very disruptive. The key to ensuring compliance is to consistently perform compliance-related processes. This requires higher levels of

business process automation, providing guidance at that point in time when an action or decision is made that impacts compliance. Processes must be extended beyond existing transactional ERP systems in order to ensure repeatability and sustainability. Compliance processes are in many cases subprocesses of day-to-day work and cross-multiple applications. An example is revenue recognition, which is typically a multistep, manual process within many organizations. Process automation allows the integration of rules into existing applications, such as billing and accounts receivable to help users make the right decision. This integration is key to making compliance processes repeatable, sustainable, and manageable for all employees involved, essential for mitigating compliance risk.

SARBOX 404 requires that employees responsible for activities that are subject to key controls of the organization assess the effectiveness of those controls. Process automation and collaboration certainly help relieve the burden of manually driving assessment and sign-off processes into the organization, but key to proactively managing compliance is the automation of exceptions handling and remediation processes. Through the use of business rules, business process automation technology can identify exceptions and automate the process to notify and enforce remediation processes that might otherwise be invisible.

Information

Compliance requires the integration of transactional data as well as documentation, which may be captured by applications across a compliance process. Asking employees to manually integrate this information is cumbersome and subject to error. Process automation can bring this information into newly defined processes that automate manual integration efforts and enable employees to focus on analytical versus manual tasks. Information outputs (i.e., analysis of decisions, evidence, reports) of the compliance process are required to be retained with an audit trail providing a record of events and supporting documentation, which must be managed and retained for compliance purposes. Organizations gather this documentation after the fact, and still can not manage version updates, records management, and retention policies. By integrating content and records management application capabilities into key operational activities, organizations can not only streamline manually intensive processes but achieve a greater level of data and information stewardship through automation.

Table 1 below gives several examples of the people, processes, and information dynamics across a few areas of legislation. Let's take a deeper look into two areas of enabling technology in support of compliance and broader initiatives: business process automation and data stewardship.

TABLE 1

Legislative Impact

Legislation	People	Process	Information	Retention	
<ul style="list-style-type: none"> • Sarbanes-Oxley Section 404 • Certification of Internal Controls 	<ul style="list-style-type: none"> • Assessment & certification of internal controls • Education on policies • Assurance that proper steps are taken to assess and remediate 	<ul style="list-style-type: none"> • Integration of policy education and assessment/testing in day-to-day work 	<ul style="list-style-type: none"> • Input • Documented controls and test execution plan 	<ul style="list-style-type: none"> • Output • Assessment of controls. • Evidence. • Certification. 	<ul style="list-style-type: none"> • Retention • Documentation and audit trail of test results for 7 years
<ul style="list-style-type: none"> • Emissions Management • Kyoto Protocol, • US Clean Air Act 	<ul style="list-style-type: none"> • KPI dashboards • Aggregated visibility of emissions across an enterprise 	<ul style="list-style-type: none"> • Risk assessment and corrective action • Trading of emission allowance in commodity markets 	<ul style="list-style-type: none"> • Collection of data from plants, calculation formulas 	<ul style="list-style-type: none"> • Report filings • Calculated quantity of emissions 	<ul style="list-style-type: none"> • Maintain detailed audit trail and archive documents
<ul style="list-style-type: none"> • Global Trade — Denied Party List Screening • Export/ Import License Control • Embargoes 	<ul style="list-style-type: none"> • Exception Management • KPI Dashboards • Self-service capability 	<ul style="list-style-type: none"> • Screening and License Management integrated along each step of order-to-cash and procure-to-pay processes to mitigate risks of noncompliance 	<ul style="list-style-type: none"> • Governments all over the globe update and publish Denied Party Lists 	<ul style="list-style-type: none"> • Document "hold" till compliance review and decision 	<ul style="list-style-type: none"> • Maintain detailed audit trail and archive documents

Source: IDC, December 2004

Compliance and Business Process Automation

Just as ERP applications have automated operations, enterprise platforms are now addressing process integration and analytical decision support. This is key to supporting compliance processes, which may extend day-to-day activities to include documentation of decisions made. To automate a process requires more than an attractive dashboard interface. Consider planning in its many forms. Planning is a collaborative process that requires the coordination of the activities of individuals with diverse roles and responsibilities. Applications that support collaborative processes such as planning are replacing spreadsheets and email — software that was never intended to support such a collaborative process.

Compliance initiatives require a coordination of activities and information (e.g., internal control evaluations, report filings) where the level of business process automation supported by enterprise applications today is incomplete. Many times entire compliance processes are handled manually by knowledge workers. If exceptions occur, they are not visible and individuals decide what course of action to take. For example, an established customer requests a large order that exceeds their credit limit. Should the order be refused or should the credit limit be increased? This decision is made by a credit manager without any guidance from the application or audit trail. The lack of alignment with corporate policy is not always visible, or is discovered after the fact.

Manual handling of the steps required to make such an operational decision (because they fall outside the scope of the order management application) has a negative impact on employee productivity and forces people to act as "human integrators" between disparate applications. And now, regulatory requirements under SARBOX, for example, require organizations to certify that key processes are performed consistently and repeated. A suboptimal decision can impact business performance. What is the likelihood that each credit manager will apply the same criteria to arrive at a decision? This lack of applied process and policy to decision execution across the board can represent a significant internal control weakness.

Compliance initiatives currently focus on the definition of such decision-oriented processes which, to make repeatable and sustainable, require automation. The result is greater consistency and efficiency, as well as the capability to demonstrate to auditors or enforcement officials that the organization's policies and processes are enforced. The application can be inspected to verify the logic and workflow. An audit trail of both information as well as action is retained and auditable.

Compliance Requires an Information Management Strategy

Sarbanes-Oxley Sections 404 (internal controls) and 302 (financial reporting) highlight the importance of generating financial information within the boundaries of key internal controls. For financial-intensive processes, much of the historical challenge has been around the integration of structured data. Financial consolidation (integrating data from heterogeneous general ledgers) has a long-standing history and there has been an up tick in demand for financial consolidation packages. SARBOX has imposed new strictness on data auditability and also in the management of supporting documentation, policies, and procedures (e.g., unstructured information or content). From an IT perspective, data quality initiatives have suddenly gained greater urgency.

But it is not only SARBOX that has an impact on the management of both transactional information as well as unstructured information. Other regulations, notably CFR Rule 11, requires life sciences companies to manage and retain electronic records (with electronic signatures) which are considered replacements for paper records. SEC 17a-4 for the financial services industry requires organizations to be able to capture, index, archive, search, and retrieve their email and instant message (IM) communications. This gives priority to content and records management technologies, as much of the information to support compliance is in the form of documents or unstructured data.

Organizations now have a much greater obligation than before to ensure that records (transactions, documents, sometimes extending into email) are not altered, viewed, or deleted by unauthorized people — a records management strategy. Ensuring the integrity of information is the crux of almost all regulations, and there is an onus on companies to get their records management strategy together. At its core, a records management strategy has three elements:

- ☒ **Integrity.** The record has not been altered since it was created.
- ☒ **Authenticity.** The record is what it is said to be and the source or origin is reliably demonstrated.
- ☒ **Accessibility.** The record is accessible in a timely manner throughout the life cycle of the record.

A key aspect of many regulations is the retention of information for prescribed periods. Historically, most legislation becomes more and more prescriptive over time as to what information needs to be retained, even if initial regulations are vague. For example, SEC 17a-4 requires broker/dealers in the financial services industry to capture, index, archive, search, and retrieve email and instant message (IM) communications. As CIO's consider the requirements for an information management strategy for their organization, it is critical that records management be part of the equation.

A Compliance Platform: Meeting Current and Future Compliance Challenges

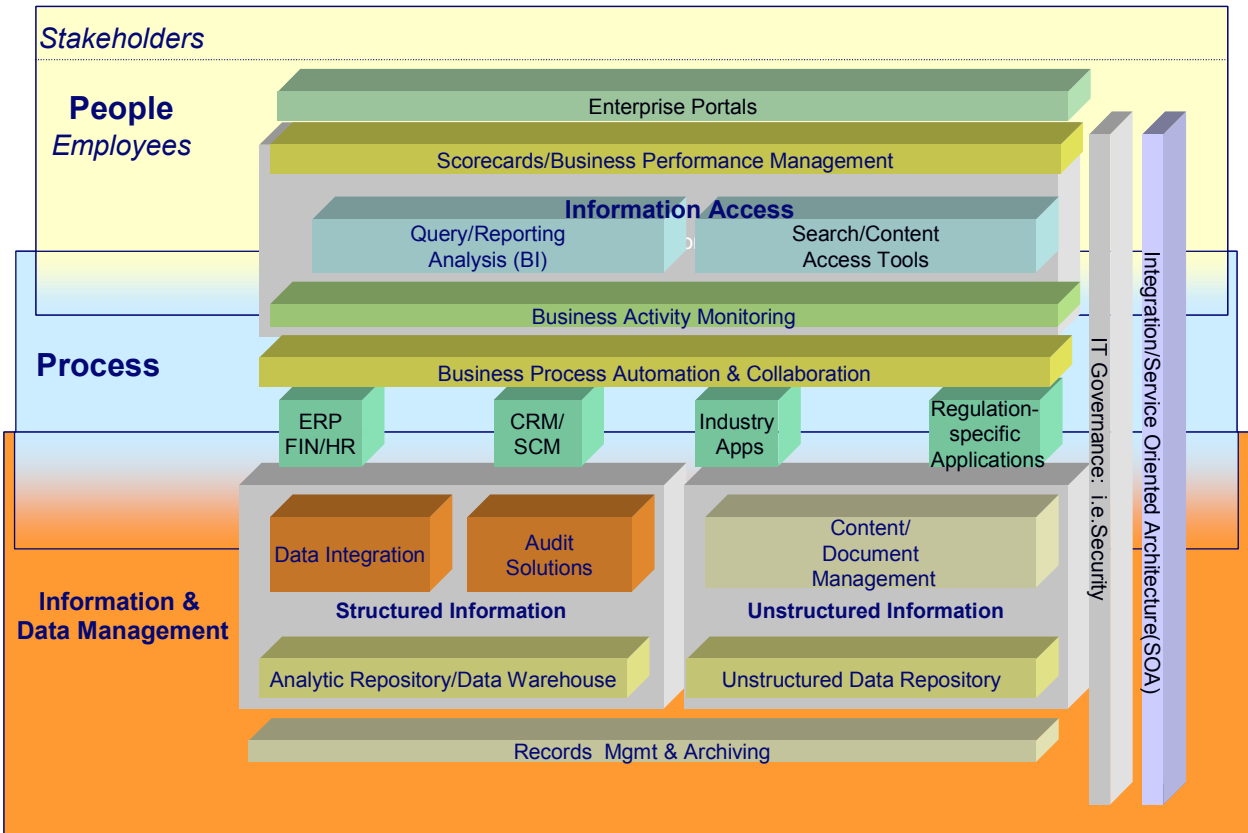
IDC's compliance platform model specifies the business applications required to support an adaptive compliance process. While the model is described in terms of compliance capabilities that will support an organization's ability to keep abreast of changing regulations, what is important is that benefits extend to supporting changes to business practices caused by economic or competitive trends.

The IDC Compliance Model

The IDC model for compliance centers around the capabilities of technology to support integration across people, processes, and information as described previously. At its core, the compliance model provides a framework for business process automation and information management, ensuring enough flexibility to make adjustments in response to new legislation. Figure 1 illustrates this model, highlighting the technologies needed to integrate information, applications, and processes.

FIGURE 1

IDC Compliance Model



Source: IDC, 2004

The compliance model consists of three layers that support people, process and information integration. The layers are not mutually exclusive but are overlapping, recognizing that sustainable compliance under most legislative areas requires a combination of capabilities across all three.

People

Technologies that support this layer provide a window into compliance based upon information that people require and activities that people must perform:

Enterprise portals and dashboards enable proactive delivery of role-based information to the knowledge workers in the organization that are key to compliance execution. Portals provide dashboard interfaces for monitoring business performance and are the gateways to both structured and unstructured information.

Business performance management applications leverage the information assets of the organization to support proactive decision making. Performance management applications, such as scorecarding, planning and forecasting, and financial

consolidation and reporting can support dual goals of both compliance and automating business performance management processes. Scorecarding can facilitate the delivery of leading compliance indicators to those accountable as part of a more holistic performance management strategy. Forecasting capabilities enable scenario planning, such as the modeling of scenarios in response to material events that can help companies proactively manage compliance risk. Implementing performance management applications to complement the existing application infrastructure is a first step that organizations can take to achieve both business and compliance benefits.

Information access is critical to decision-centric processes and are critical to provide the analytical capabilities that support compliance, in particular, when collecting evidence to support compliance decisions or remediate compliance exceptions.

- ☒ **Query/reporting/analysis (BI).** Access to structured data (such as financials) is needed to produce statutory mandated reports, but also for analyzing changes in trends or key performance indicators.
- ☒ **Search/content access tools.** Provide access to unstructured data or documents. If the text is linked to structured data (e.g., annotations on financial plans or budgets), search and other forms of content access (e.g., categorization, text mining) can provide a powerful means to understand the context for the financial data and explore the causes for changes in business trends.

Processes

Business activity monitoring — monitoring business events to assess the state of a process, sending alerts to the knowledge workers responsible for actions and/or triggering a rule to respond to the condition.

Business process automation defines and executes business logic and workflow via business rules in a separate layer not hard-wired within individual applications (leveraging Web service standards, such as SOAP, and process standards, such as BPEL to form composite applications), enabling the configuration and redirection of a process based on events and data analysis. Collaboration capabilities support interactions within a business process, especially the making and implementing of decisions that coordinate activities of people within and outside the enterprise.

Information

Information and data management transforms and integrates relevant data and content in support of dynamically configurable business processes. Compliance in particular requires the integration of structured (transactional) and unstructured (documents, etc.) information into processes.

- ☒ **Data integration.** Bringing together transactional information from multiple sources and systems to provide analytical capabilities, such as a data warehouse.
- ☒ **Audit solutions.** Application of business rules to identify unusual or material transactions.

- ☒ **Content/document management.** Managing documents and other unstructured information through cataloging, storing, and applying search and retrieval capabilities for analysis.

Many compliance processes are handled in part via transactions in enterprise applications. But the level of business process automation is incomplete. For example, many times material transactions in an organization are manually flagged. Supporting documentation in the form of additional analysis reports and other documentation is gathered to assess that accuracy of the transactions. All of this documentation must then be retained to provide a complete audit trail of information to meet legislative requirements. In many cases, this is a reactive, manual integration effort that takes place after the transaction is recorded, creating binders or files of information that are both transactional and supported by other information, such as documents that represent records of the organization.

But by integrating, for example, business intelligence and content management application capabilities into transactional processes, a new, dynamic business processes is created that replaces manual integration, saving time and meeting compliance needs.

Records management. Managing the information assets of the organization makes sense from a business continuity standpoint but is also legislatively mandated. As regulations, such as Sarbanes-Oxley become more prescriptive in the detailed requirements for retention of transactions, documents, and digital information (e.g., email), organizations need a holistic records management platform to support this process. Records management software enables organizations to standardize how they manage records; ensure their integrity and authenticity; provide accessibility as needed, for example to support a legislative review; and provide an audit trail as required by good corporate governance and most regulations.

Integration/service-oriented architecture (SOA). Fundamentally, a SOA allows organizations to build applications that integrate information and events into custom composite applications that cross existing applications and information repositories to create a new, automated business process.

The technology components of the platform described above are powered by the SOA to create new, dynamic processes that can be applied to almost any compliance scenario as well as mission-critical business processes of the organization that represent an opportunity for increased efficiency or proactive decision support.

Many of the compliance challenges that organizations have are based upon current processes that may be executed within current enterprise systems, but have control or documentation gaps. A SOA can introduce additional steps to a current process, such as requiring documentation which is then managed by a content management system, into a current process without having to redesign current systems. As companies identify high-risk compliance processes, IT can shorten the time it takes by leveraging an architecture that accommodates this flexible process redesign.

IT governance. Managing the reliability of the IT infrastructure supporting the enterprise environment is causing organizations to revamp security practices and

automate processes such as change and configuration management. Key to the ability to certify internal controls is ensuring the architecture is secure from external threats or unauthorized changes. Platforms which incorporate these capabilities bring organizations one step closer to good IT governance.

The technology components of the platform described above can support new, dynamic processes that can be applied to almost any compliance scenario as well as other mission-critical business processes of the organization that represent an opportunity for increased efficiency or proactive decision support.

Over time, expect to see more applications that will automatically make repeatable, operational decisions that require collaborative effort. Examples are:

- Whether to continue R&D for a particular drug
- Whether to modify the terms of a contract for a particular customer
- Whether to bid on a project
- How to record an invoice based upon revenue recognition guidelines

Designing applications for these operational decisions requires a platform that combines support for people integration, business process automation and information integration. NetWeaver is an example of such a platform.

SAP's Composition Platform for Compliance and Long-Term Governance

Composition platforms like SAP NetWeaver enable compliance initiatives by supporting the rapid creation of new business solutions based on the modular integration of existing business processes with new data sources and business logic. To efficiently address time and budget constraints and constantly evolving requirements, a long-term compliance strategy must leverage existing applications and a flexible technology framework for developing compliance-related business processes. SAP addresses both these needs through its composition platform, SAP NetWeaver. SAP NetWeaver allows enterprises to assemble composite applications that utilize existing business processes without disrupting them and to assimilate a wide range of IT systems without expensive point-to-point integration.

The SAP NetWeaver composition platform provides an open foundation for tying together disparate sources of structured and unstructured information and for quickly developing scalable compliance applications. The changing regulations and resource pressures that drive compliance initiatives dictate that enterprises find a way to economically utilize their core business processes without compromising their ability to deploy new applications and integrate new data sources. An open technology platform like SAP NetWeaver allows IT organizations to gain more value from their existing information systems through a standards-based approach that allows developers to assemble composite business solutions that span IT silos. These composite applications can create new business solutions that address specialized compliance requirements without interfering with critical production systems. The

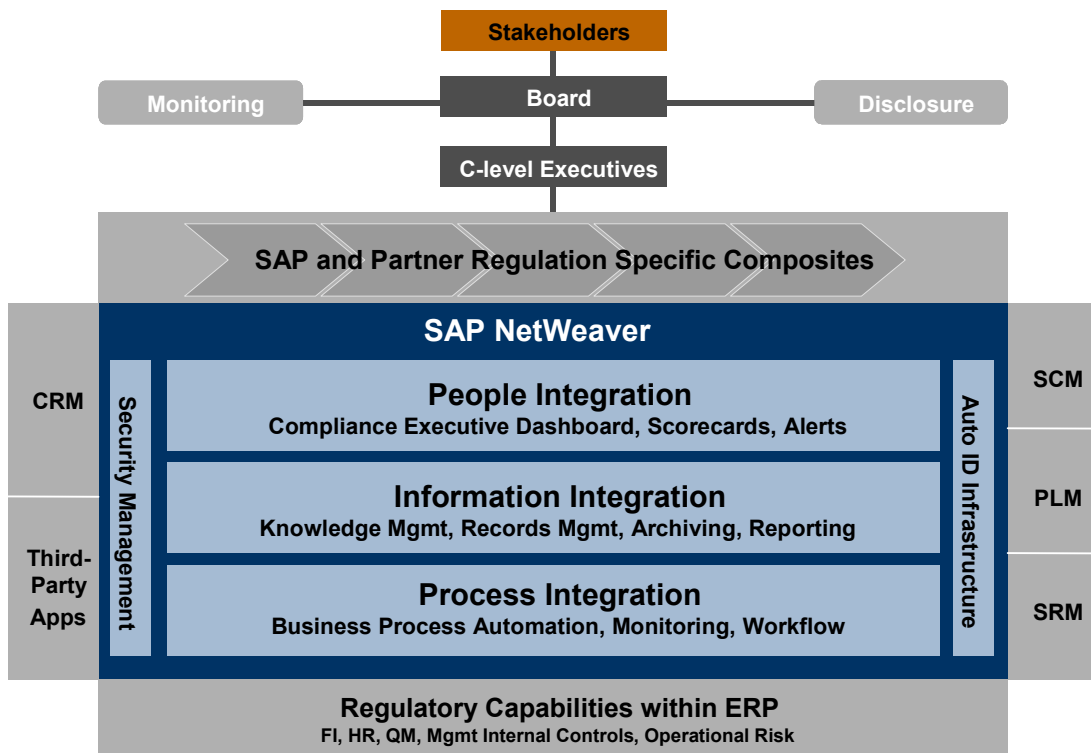
composite platform underlying these solutions provides the flexibility to incrementally expand to integrate additional sources of information and business logic to solve new problems and target new user audiences.

Process Platform

SAP's solution for regulatory compliance is powered by the SAP NetWeaver composition platform and services-based architecture. This flexible platform enables organizations to implement applications that combine business process automation with the ability to make adjustments based on events and data analysis (see Figure 2).

FIGURE 2

SAP Business Process Platform for Better Governance



Source: SAP, 2004

Compare the SAP architecture as shown in Figure 2 with the IDC Compliance model as shown in Figure 1. The SAP solution incorporates the following capabilities:

- ☒ **People integration.** Supports a portal based user interface for directing the appropriate information to individuals or to collaborative teams. The use of role-based dashboards and scorecards delivers appropriate information based upon

the compliance responsibility of the user — in essence a *window* into compliance. This maps to the "People" layer of the IDC model.

- ☒ **Information integration.** Supports the integration and alignment of both transactional data as well as documents and other content, which is integrated into compliance processes for analysis, documentation, and audit trail purposes. The integration of heterogeneous information and data is key to replacing many of the manually intensive compliance processes that exist today. This layer maps to the Information and Data Management layer of the IDC model.
- ☒ **Process integration.** Supports the definition and execution of a business process across underlying applications. Business rules reside outside of specific applications and drive new, cross functional processes. Monitoring and workflow capabilities automate these processes and support collaboration across multiple parties. This maps to the Business Process & Application Automation and Integration, Event & Deployment Services layers of the IDC model.
- ☒ **SAP regulatory capabilities.** SAP delivers cross-industry and industry-specific compliance modules and capabilities. The following examples are just a few of the compliance capabilities that exist within the ERP or industry specific functionality of the SAP application suite:
 - ❑ **Management of Internal Controls (MIC)** of the Sarbanes-Oxley Act's 11 titles, sections 302 and 404 are of particular interest. The SAP MIC application helps certify the accuracy of quarterly and annual financial statements and disclosures; design, establish, and maintain disclosure controls and procedures; evaluate the effectiveness of disclosure controls and procedures and report on the effectiveness of the controls; and indicate, in each periodic report, any significant changes in internal controls, including any deficiencies and material weaknesses that have taken place since their most recent evaluation.
 - ❑ **Whistle Blower.** Supporting SOA section 301 — Anonymous Complaints: Through the use of the SAP Portal, anonymity is maintained through automatic mapping to a dummy user. The system generates a complaint number and stores the complaint anonymously. Anonymous follow-up, may be driven through workflow, and reporting of the compliant process is provided..
 - ❑ **Audit Information System (AIS).** As the auditor's toolbox within the SAP environment, the AIS application provides comprehensive functionality for system and business audits. The application enables a complete, drill through audit trail back to the document level and facilitates testing of exception.
 - ❑ **EH&S.** Complete solution for Industrial Hygiene which is integrated into Logistics, HR and Financial ERP applications. The solution automates EH&S tasks, such as MSDS preparation or waste classification as well as the distribution of legal required documentation.

- ❑ **Basel II.** Supports the monitoring of market risk, credit risk, and operational risk, serving as an integral part of a credit risk platform for managing regulatory and economic capital.
- ❑ **CFR Part 11.** SAP provides esignature and erecord technology supporting the transition from manual, paper based systems to automated processes.
- ❑ **Composite applications.** Applications which seamlessly merge multiple transactional and analytic applications by leveraging the people, process and information integration capabilities of SAP NetWeaver.

SAP has developed applications to support specific compliance challenges:

- ❑ **SAP Global Trade Services (GTS)** is designed to manage the complexity of global trade, including the automation of global trade compliance and minimizing the risk of penalties and fines. GTS focuses on three main areas of import-export compliance, namely sanctioned party-list screening, license management, and embargo checking. Trade compliance is key not only to minimize compliance risk but to eliminate supply chain bottlenecks that can be caused by noncompliance.
- ❑ **SAP Emissions Management (EM)** supports the emissions management process that is spread across disparate enterprise systems. EM is designed to support the ability to monitor, measure, document, and control emissions output efficiently and enable an organization to comply with operating permits, avoid fines, and take advantage of the emerging emissions trading market.

These composite compliance applications based upon the NetWeaver architecture are real examples of the ability to support the design and deployment of flexible business process — a key to meeting compliance requirements via a dynamic approach to IT.

CHALLENGES/OPPORTUNITIES

Compliance Challenges

Organizations may view compliance as a cost of doing business, and therefore may not have the mindset to invest strategically in a technology platform. Organizations need to think about short-term as well as long-term goals, and determine how to best justify compliance investments. IDC has found that organizations that are further along have incorporated compliance into broader initiatives around enterprise risk or corporate governance. As organizations look at the challenges that compliance poses to the corporation, the ability to see beyond the short term and look at the multiple business benefits of these technology investments — process automation and sustainability, information transparency, and on-going flexibility — is key to making investments that should be viewed not as a short-term project but a long-term strategy.

Opportunities for a Compliance Platform

Enterprise applications have advanced over the years by automating more transactional business processes. Yet there are many processes to be automated and too many instances where the disparate applications force "human integrators" to do the work software should have addressed. In some cases these are complex processes that in the past required custom applications and many times remain manual processes. Many of the regulatory compliance examples fall into this category, increasing the cost and risk of compliance for organizations.

There is an opportunity for broader business process automation to support compliance as well as other mission-critical processes. This requires an advanced application platform and specialized domain expertise. SAP's investment in NetWeaver demonstrates these capabilities. SAP's commitment to composite applications clearly illustrates the next generation in software evolution where service-oriented architecture permits the assembly of transactional and analytic components into sophisticated, intelligent composite applications. The SAP composite application strategy has already addressed information-intensive compliance processes, such as Global Trade and Emissions Management. As SAP delivers composite applications that meet compliance needs coupled with an extensible platform that users can customize to meet their own requirements, significant value is delivered to organizations that enables addressing compliance requirements and other challenges.

Looking ahead, regulations such as Sarbanes-Oxley require companies to provide immediate notification to shareholders of any material change in the company's financial position. The so-called "real-time" provision will require companies to examine leading indicators of financial performance, rather than simply reporting quarterly results, a capability provided by applications such as SAP's Strategic Enterprise Management. Such leading indicators might be a change in market demand from a product (based on an analysis of point of sale data), or it could be a loss of a key supplier or customer that must be tied to the financial data. This puts a priority on data integration and analysis across functional systems. A platform that supports the convergence of structured and unstructured information and provides information access capabilities across both is powerful. For example, text mining of the notes of call center agents or service technicians (which is then related to an analysis of the transactional data) may provide an early warning of a change in customer attitudes or a product defect that requires correction. The bar for enterprise information integration and deeper analysis across all types of data is gaining in importance, and a platform that supports compliance today and broader risk and governance initiatives tomorrow may in the long term be the most strategic and cost-effective option.

CONCLUSION

Compliance is an imperative that reaches across an organization. IT provides essential support, as the enterprise architecture can serve as an enabler, but also as an area of risk when considered through a compliance lens. The urgency to meet short term deadlines need not derail a long-term IT strategy. Common requirements

across multiple regulations can be supported via a compliance platform that will be flexible over time. Such a platform must have capabilities for business process automation and information integration and management. The good news is that these are priorities for an IT architecture that can support an agile business. Meeting requirements for compliance as well as broader business performance management and process improvement goals is a way to balance short-term needs with longer-term vision. SAP NetWeaver is designed to support applications that meet changing regulatory requirements but also the needs of an adaptive business.

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