GOVERNANCE, RISK & COMPLIANCE (GRC)
IN A DIGITAL WORLD

Digitalization is one of today's biggest mega trends. And it isn't just an IT topic. Digitalization is fundamentally transforming our everyday lives. The Internet and social networks have changed information consumption forever, established unprecedented transparency and created a new competitive landscape.
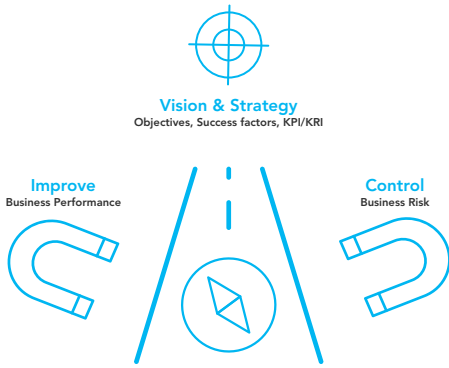
With big data and the Internet of Things a completely new information network has emerged, for example in the field of traffic management or market research. The possibilities associated with industrial 3-D printing seem to be posing a threat to entire sectors. Anything that can be printed "on the fly" from metal or plastic doesn't have to be made overseas or shipped to production sites.

Just as digitalization is transforming our everyday lives, it is also changing organizations' strategies and processes. Innovation and transformation are omnipresent requirements. Digitalization is fundamentally and sustainably transforming organizational structures, processes and sometimes even entire value chains.

New opportunities are emerging but so are risks. Attacks on digital infrastructures, theft of digital resources and misuse of digital communication are a few examples. New regulations mean greater pressure on organizations to adapt their structures and processes.

Methods and technologies have been developed for embracing the challenges associated with these changes. These technologies lay a foundation for a new goal-oriented way of developing a business. Risks and threats can be recognized early and managed preventatively. Proof of compliance with internal and external regulations has become more effective.

Digitalization provides the prerequisite for effective, proactive risk management and transparent, traceable corporate governance.

Vision & Strategy
Objectives, Success factors, KPI/KRI

Improve
Business Performance

Control
Business Risk

Performance, processes and risks

The changes brought about by digitalization are most apparent in two areas:

1. Greater speed and flexibility for changing business models and the associated business processes

2. Earlier involvement of more thorough risk management in the design and execution of processes

Business process optimization has been a huge topic in many companies for years. But the realization that early consideration of internal and external regulations is now necessary has only just entered the playing field. Early involvement of risk analysis is also of great value for ongoing optimization and growth of a company. And not only when it comes to internal processes. This is especially true regarding the customer experience, in other words, business processes from the customer's point of view.

Here, organizations must give early consideration to decision processes and implement proactive, preventative management of potential risks and regulatory requirements for business models and process design and execution.

This applies even more so in the era of digitalization. Especially because innovation expectations are constantly growing due to disruption, change, new regulations and more diverse, serious risks, the combination of Business Process Analysis (BPA) and GRC as a common methods framework and an integrated technology platform is highly valuable.

Software AG's Digital Business Platform offers precisely this integration of business process optimization and performance/risk management while also ensuring transparent and sustainable governance.

Changing the business model into one that is driven by customers, powered by processes and fueled by IT will deliver significant improvements in customer experience and business efficiency.

GRC as a component of an integrated management system

The detailed list (ISO 31010) of requirements under ISO Norm 31000 states that risk management "output" must be the "input" for a decision process in an organization. Risk management must interface with other areas of management.

The right balance between performance and risk management ensures ongoing improvement processes management must interface with other areas of management.

This requirement basically means that modern, risk-appropriate corporate governance has to align its business and operational performance management. Operational planning (processes, infrastructures, quantity estimates, etc.) must account for potential risks and ways to mitigate them. Part of risk analysis must be to examine whether operational processes are sufficiently safeguarded against attacks and failure. Continuous monitoring of control mechanisms and documentation of deviations as well as implementation of the necessary adaptations all have to be mapped out in a structured, transparent and well-planned way. The organization must actively document damaging events and automatically utilize them for its continuous improvement process:

Risk management must become an integrated, operational and ongoing management process with active involvement of all stakeholders.

All these requirements are met by Software AG's Digital Business Platform:

| Define Digital Strategy	Design/Plan Digital Business	Implement Digital Business	Execute Digital Business	Control Digital Business
Assess strategic risks and risks in executing strategy	Create risk-adjusted performance measures	Define risk-sensitive implementation project plan	Train operational people	Schedule risk and control audits
Evaluate different strategic options from risk point of view	Define business model including risk and regulations	Create project audits and risk alerts	Test and improve risk mitigation controls	Monitor risk and performance indicators
Define corporate governance, compliance organization and risk methodology and appetite	Design to-be processes including risk and control points	Monitor achievement reports and rolling risk exposure	Receive risk and incident alerts	Initiate continuous improvement

GRC Throughout Stages of the Digital Journey

GRC use cases

Software AG's GRC solution covers all GRC use cases:

• Risk management

• Internal Control System (ICS)

• Audit management

All three GRC use cases complement each other. The data and results from one scenario are available as input to the others. Furthermore, there are survey and incident documentation modules that can be used for all GRC cases. All Software AG GRC use cases can be linked to BPA.
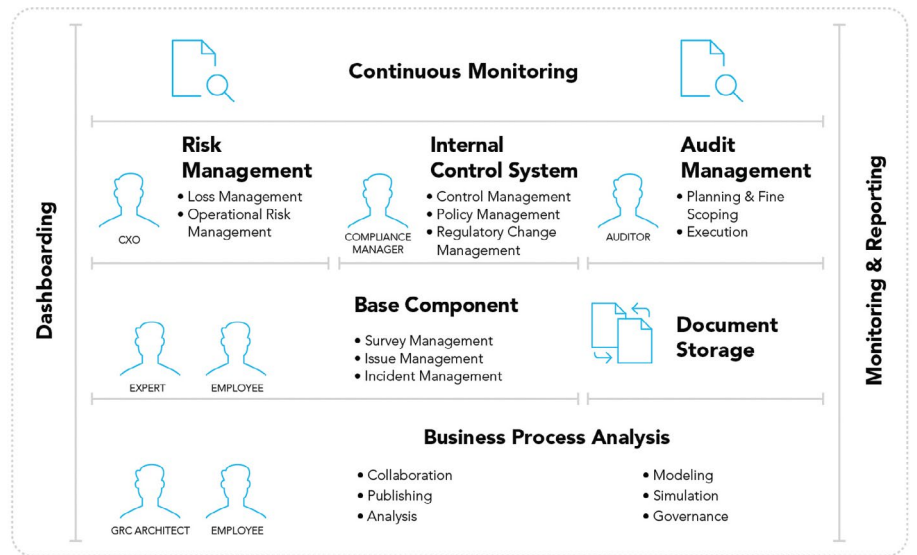
Modules of Software AG's GRC Solution

Look out for risks!

Taking account of risks in enterprise structures (organization, IT systems) and in the design and execution of business processes is an essential task of company management.

A key step here is establishing transparent operational structures and processes. What risks could arise in an organization and where? A "risk inventory" provides the basis for deciding how to best handle risks.

A combination of a top-down risk inventory, with central risk catalogs, and a bottom-up inventory with employees' active involvement in surveys, is ideal. Software AG's solution enables both approaches and thus offers the highest level of flexibility.

Risk-relevant events and any losses are documented and risks are assessed by category (financial, reputation, etc.). Direct quantitative and/or qualitative assessments are used as well as indirect methods such as surveys. The results serve as a basis for deciding if mitigation measures need to be taken. Modification or definition of controls, communicating policies, documenting damage, losses or irregularities and initiating audits provide interfaces with other GRC use cases.

Digital Transformation offers new approaches for documenting risks when they arise. One such use case is a mobile app that lets users identify and describe a problem, including a photo, and forward it to those responsible. This type of "risk-catcher app" enables users to recognize the need to act quickly and simply and take the necessary measures.

There are also valuable approaches when it comes to the hot topic of "customer journey." Risks associated with the relationship between companies and their customers can be recognized and handled early. The explicit allocation and assessment of risks while planning customer touchpoints enable the ideal customer journey.

Thanks to digitalization companies can implement new business models more quickly, adapt their processes and react early to new risks or damaging events.

Furthermore, with Complex Event Processing (CEP) and big data, organizations can recognize behavior patterns among customer transactions or indicative trends from machine data and social networks. This helps make use of valuable time before risks arise.

The foundation for successful risk management is providing all stakeholders with a joint transparent platform where correlations are visible. Target group-specific evaluations of joint data resolve complexity issues. Collaborative measures resulting from different use cases optimize GRC management.

Only by involving all of an organization's relevant stakeholders from controlling, process and IT management as well as all types of risk managers will the relationships between risks and the business ecosystem be visible.

Only the integration of GRC and business perspective can ultimately establish the necessary transparency. It allows the business expert to see the risk information relevant to him or her and the GRC specialist to understand the operational correlation between business process and resources, documents and systems.

RISK UNDER CONTROL

BETTER COMPLIANCY

HIGHER FLEXIBILITY

An integrated GRC management systems offers many advantages.

Everything under control?

Establishing and maintaining an internal control system is a time and resource-intensive task for many organizations. But digitalization offers options to combine proven approaches with new technological functionality. For example, advantages have emerged for automating controls and workflow-based control tests. This makes having an ICS faster, more efficient and more cost effective. Organizations can also respond quickly to necessary changes; and the system can be kept demonstrably effective. Appropriate control activities within business processes are just as much a priority as policy creation, communication and compliance along with other governance activities.

Aside from planning and rolling out an ICS, it is also important to ensure ongoing functionality testing and verification as well as manipulation security. Like with risk management, information must be available about business process relationships, the type of controls, control compliance and execution and the creation, approval and acceptance of policies.

The goal is to verify that controls are working using workflow-based manual tests or information from the digital real world (e.g., Internet of Things: reading machine controls).

Digitalization of the relevant business and production processes poses new challenges, but also opportunities for an ICS.

Transparent integration of company environment and GRC elements is absolutely necessary. The relationship with detailed graphical processes is essential for designing effective controls. Documenting controls and tests at the appropriate level of aggregation increases transparency for users.

A practice-oriented ICS enables not only scheduled execution of controls and tests, but also ad hoc responses to events and incidents with unscheduled control tests.

Here again, the use of big data and CEP enables fraud detection, tracing and follow up.

Monitoring and evaluating a control system on an ongoing basis and analyzing the impact of activities are key components of GRC management. In addition, the ability to react quickly and effectively to business (regulatory change management) or strategy changes are also of utmost importance.

A digital workflow controls the creation, approval and communication and evaluation of regulations and policies across all relevant stakeholders. Discussions and feedback on content must be incorporated at an early stage to account for ideas and improvements from the beginning.

Effective audits of GRC and BPA activities

The third use case, audit management, supports all steps of an audit, including audit planning, execution and reporting. The common data shared by BPA and GRC allows digital enterprises to use both as the basis for planning their audits. They can decide which aspects of the business should be part of the audit's scope using past risk assessments as well as the results of the ICS evaluation.

Where do risks exceed a defined threshold? Which IT systems had the most problems with ineffective controls last quarter? Which processes exhibited "suspicious" activities by an external party? When planning and executing an audit, it is key to make all relevant information available online in a timely fashion. Risk assessments, the results of control tests, questionnaires filled out by the surveyed departments and the documented process incidents or damages provide plausible and reliable data for completing each individual audit step and for deciding where compliance breaches have occurred.

Providing direct access to measures taken and the resulting improvements, insight into not-yet completed activities, the development of risk assessments over time (regarding qualitative and/or quantitative level of damage and incidence rate) illustrate to internal and external auditors and other stakeholders how successful a company's GRC activities are.

Understanding the relationships between these GRC and BPA elements is of utmost value. Transparent dependencies between processes—including key people and supporting IT—the risks, controls, control tests and the documented damages, incidents and measures provide the necessary information for smooth audit management.

It is also necessary to understand the relationship between the audits themselves to have a complete picture of an organization. Different audits can involve the same processes, organizational entities or IT systems. They can have contradictory yet complementary requirements. Again, a digital approach will help recognize, discuss and leverage potential for joint coordinated activities.

Conclusion

If a company wishes to embrace the challenges and opportunities of the digital world, its management must use this transformation to its own benefit.

Transformation processes are getting more and more in-depth, and technologies are becoming more and more integrated in our everyday (business) life. They enable and require a digital transformation of management, business and production processes.

Take advantage of this change. Software AG's BPA and GRC solutions offer a one-of-a-kind way to expand the complete management and change process from both a business and organizational perspective into an integrated performance and risk management system.

With our "strategy to model" and "model to execution" approaches, we incorporate strategic goals, with their tactical opportunities and risks, into business processes and structures. Momentum, transparency, structure and traceability are the pillars of enterprise transformation.

In a Digital Enterprise:

- Collaboration replaces silo mentality
- Opportunities and risks are considered preventatively for decisions
- A flood of data becomes relevant, up-to-date and personal information

Benefits of Using Software AG's GRC Solution

10 key takeaways about GRC in a digital world

1. **GRC is a business process**	Don't base your compliance on Microsoft® Office tables and distributed documents and archives.
2. **GRC is a management process**	Pursue your GRC objectives with good planning, transparency and structure.
3. **Information silos—no way**	All areas of GRC must work and collaborate with the same data.
4. **Link your strategic goals to your operations**	Link your financial, operational and strategic goals to your change processes.
5. **Create transparency**	Traceability and transparency help avoid risks and establish trust.
6. **Governance is compliance is risk is processes**	Strike a balance between regulatory and business requirements.
7. **Performance comes and goes with risk**	Risk-appropriate performance optimization means sustainable corporate governance.
8. **Consider your processes**	The business process is the cornerstone of business change.
9. **Collaboration is key**	GRC and other areas of management must steer business development together.
10. **Digitize now!**	Digital methods, processes and technologies are the right solution for today's challenges.

Take the next step

Integrating performance management and GRC is mandatory in today's digital world to support your company's survival and competitive differentiation. With it, you can integrate all relevant information and documents, take balanced decisions and show relevant stakeholders—internally and externally—that risks are under control.

ARIS BPA and ARIS GRC are the essential building blocks for your future digital GRC management system and fulfill both your strategic and operational requirements.

Talk to your Software AG representative to explore how ARIS can support your enterprise in the digital age—where change is the only constant.

ABOUT SOFTWARE AG

The digital transformation is changing enterprise IT landscapes from inflexible application silos to modern software platform-driven IT architectures which deliver the openness, speed and agility needed to enable the digital real-time enterprise. Software AG offers the first end-to-end Digital Business Platform, based on open standards, with integration, process management, in-memory data, adaptive application development, real-time analytics and enterprise architecture management as core building blocks. The modular platform allows users to develop the next generation of application systems to build their digital future, today. With over 45 years of customer-centric innovation, Software AG is ranked as a leader in many innovative and digital technology categories. Learn more at www.SoftwareAG.com.

wp_aris_grc-in-a-digital-world_en

software AG