

Learning, Training and Assessments in Regulatory Compliance

Implementation best practices.

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Introduction

Compliance with regulations or corporate policies has become more and more relevant in the last several years.

The paper explains nine key factors that contribute to this, including:

- More multinational companies
- Increasing regulations
- Increasing multinational laws
- Regulators requiring more training and assessment
- Regulators fining more heavily
- Widespread data security breaches
- Continued employee turnover
- Rapid technology change
- Remaining compliant despite the move to informal learning

A critical objective of managing compliance in organizations is, of course, to ensure that all employees or related target groups know and understand the compliance rules, and they can act accordingly to follow them. This white paper explains the various aspects of managing learning and assessment in the area of compliance. It begins by outlining why and how the topic has become more important, as well as the different facets of compliance learning that exist.

Technologies such as learning management and assessment management systems are then described, because only by using such technologies can organizations obtain an efficient and effective setup to deploy and monitor compliance learning and mitigate regulatory risk from people making mistakes.

The paper describes how technologies from the proven market leaders – SAP and Questionmark – can help readers create and manage training and assessment for their workforce to reduce compliance risk. It describes the business benefits of using the SAP® SuccessFactors® Learning solution, the SAP Enable Now solution, and the SAP Assessment Management application by Questionmark.

The report concludes with a look at current trends.



After reading this paper companies will be fully equipped to:

- Describe the general field of compliance learning and assessment to their workforce.
- Outline how to leverage technology from SAP to manage it successfully.

We hope readers will also take away some overall best practices and useful business benefits for their organizations.



Business Drivers for Compliance Training, Learning, and Assessments

Compliance is key for almost every medium and large business and has become more important for most businesses in the last decade.

Nine key factors are increasing the need for training, learning, and assessments to ensure that businesses stay compliant.

1. Multinational companies

Due to the Internet and increasing globalization, businesses are becoming more international and need to be compliant with local regulations and laws as they expand geographically around the world. Very few medium or large businesses operate in only one jurisdiction.

2. Increasing government regulations

Due to growing public and political concerns around perceived business failures, governments are increasing laws and regulations that impact corporations. Areas where new laws or more aggressive enforcement of laws are prevalent include anti-bribery, financial probity, data security, data protection, and consumer protection.

3. Multinational laws

Laws increasingly cross national boundaries. The United States and the European Union especially are extending laws and regulations to cover

activities outside their geographic boundaries. For example, the European General Data Protection Regulation has international coverage and the United States is seeking to enforce the Dodd-Frank Wall Street Reform and Consumer Protection Act internationally.

4. Training and assessment requirements from regulators.

Almost every industry and government regulator in almost every jurisdiction and industry has rules that require companies to train their employees, document the training, assess employees, and ensure they are competent.

5. Greater regulatory fines

Regulators are enforcing the rules more diligently and coming down harder on companies who fail to follow the rules, often with large fines. Regulators are also focusing more on training and assessment, because they see people as a key risk to compliance, and training and assessment as crucial to obtaining competence and preventing future problems.

6. Criticality of cybersecurity

In recent years, there has been a huge increase in the number and frequency of data breaches, with confidential data widely disclosed. And

because everything is connected through digital transformation, this matters to almost every company. Gaining entry to IT systems also provides new opportunities for criminals to perform blackmailing or financial attacks. Cybersecurity failures have resulted in fines, and these are likely to continue and increase. Failures also contribute to increased regulation and require companies to improve training and assessment on IT security.

7. Employee turnover

Employee turnover, resulting in continual onboarding, retraining, or reassessment, continues to be a challenge in many organizations. There is an inherent risk that inexperienced employees may make compliance mistakes until they are fully trained and have experience in their new roles.

8. Digital transformation

Most companies in almost every industry are driven by digital transformation, facing disruption in their business models. They need to grow and change, or else they risk becoming obsolete. This means that learning and compliance often also need to be digitally transformed. Companies that use manual procedures in compliance are looking to make these more digital.

9. Remaining compliant while accommodating informal learning

Increasingly, companies are seeing the benefit of informal learning and the 70:20:10 model, where 70% of learning is done on the job, 20% is facilitated by others, and only 10% of learning is formal. This allows employees to learn how they want or need to learn, but companies still need to ensure that their workforce has the right knowledge, skills, and abilities to help the business remain compliant.

The following graph of data¹ is published by the U.S. Food and Drug Administration (FDA). It illustrates the scale of the change in compliance infractions by showing the number of formal warning letters the FDA issued in the period from 2010 to 2016 for various non-compliance issues.





And it's not just letters that regulators issue. According to The Financial Times, U.S. financial institutions have paid more than US\$150 billion in fines related to the credit crisis.² And there are examples of fines in many other industries. For example, the European Union fined truck makers €2.93 billion for illegal collusion in 2016³ and has fined Google €2.42 billion in 2017 for abusing market dominance.⁴ It's not just large companies who get fines. The German Federal Cartel Office (Bundeskartellamt) issued fines of €338 million against a variety of sausage manufacturers for price fixing in 2014.⁵

Failure to effectively train or assess employees is a significant cause of compliance fines. One report by the FDA⁶ found that defective training contributed to 24% of manufacturing process errors. Fines frequently mention failure to train and assess as a contributing factor. For example, the regulator Financial Industry Regulatory Authority (FINRA) fined a U.S. financial services firm \$775,000 for training and supervisory failures. The fine stated that the firm "... failed to ensure that its registered representatives understood the unique features and risks of these products before presenting them to retail clients."⁷

In general, an organization needs to train its workforce or give employees the opportunities to learn, and then it needs to assess them to ensure that they have learned what they need to know. SAP can significantly aid this process, with technologies such as a learning management system, an authoring tool, and an assessment management system. These can directly help companies manage the training and assessment of their workforce and reduce compliance risks.

Three Drivers for Compliance Learning

Compliance is a significant driver for learning and education.

There are three main categories of compliance learning:

1. Organization Imposed

This training provides guidance to employees on such things as internal product standards, organization procedures, and codes of business conduct. Employees are tracked by attendance or course completion.

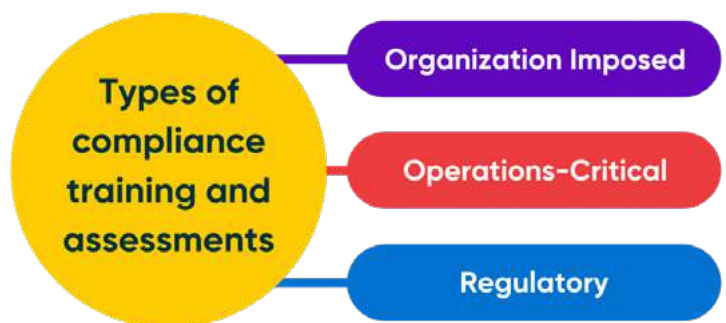
2. Operations-Critical

Critical training is for the personal safety of employees and customers, and reducing risk in the work environment. This does not include reducing the risks caused by a business disaster. A crisis of that nature falls under the regulatory control of the Occupational Safety and Health Administration (OSHA) and the category below.

3. Regulatory

Regulatory training is specifically required by a government agency or law. Not only does an organization need to comply with these requirements, it must also train its employees about the specifics of laws and show current documentation that the training requirements are being met.

The business and technology requirements for compliance training can be similar for each category. Usually tracking, reporting, security, and documentation are more complex and rigorous in organization-imposed or external regulatory compliance.



When a company or a regulatory agency is mandating what courses employees are required to take, the requirements may be the same. For the purposes of this paper, the focus is solely on the regulatory- and government-mandated compliance issues.



Regulatory-Mandated Examples

Regulatory-mandated training is either implied by laws or by certain agencies, institutes, or associations.

These include such organizations the Federal Aviation Administration (FAA), the U.S. Securities and Exchange Commission (SEC), the Federal Financial Supervisory Authority (BaFin), Institute of Public Auditors (IDW), and the FDA. When reviewing this taxonomy, remember that:

- Compliance training does not always fit neatly into one of the three categories mentioned previously. Some training may need to cross categories, depending on the needs of the business itself or the agency governing the regulations.
- The requirements are, for the most part, cumulative. This means that the characteristics of the organization category may also be applied to those in both the operations and the regulatory categories.
- Regulatory compliance is the most important requirement because of the possible legal and cost ramifications.

A few examples of the laws and regulations that have stringent training requirements are:

- Requirements to meet International Organization for Standardization (ISO) standards.
- The regulations of Sarbanes–Oxley Act of 2002, which is a U.S. federal securities law that addresses accounting standards; it was enacted after the collapse of the Enron Corporation.
- Health and safety laws including those enforced and reviewed by OSHA.
- Good Manufacturing Practice (GMP) requirements which apply particularly in the pharmaceutical industry.
- Laws requiring equal rights and forbidding sexual harassment in the workplace, such as Germany's equal treatment law, Allgemeine Gleichbehandlungsgesetz (AGG).
- Anti-bribery laws such as the Foreign Corrupt Practices Act (FCPA).
- Data security laws such as the General Data Protection Regulation (GDPR).



Compliance Training Target Groups and Topics

Both enterprise managers and employees are affected equally by regulatory training requirements.

Compliance training and assessments, however, reaches beyond the enterprise; the organization also needs to train its extended workforces along its supply chains.

Contract or external employees are a common and growing target group. For some companies, this group can be a large one due to the outsourcing trend. In a highly regulated industry such as oil and gas, external employees also need to undergo regulatory training. For example, before contractors can access production sites, they first need to be trained on health and safety standards; otherwise they cannot legally access the site. Depending on the regulations, different types of partners may also need to be trained and assessed. For example, sales partners such as dealers, or service partners like service technicians, fall into this category.

Compliance training topics include broader areas such as sexual harassment, cybersecurity, and anti-bribery, which affect all target groups in a company. Topics also include industry-specific laws that apply only to financial, energy, oil and gas, or healthcare businesses and specific job functions.



Learning and Assessment Technology

Technology to support the practices of compliance learning is essential for two reasons.

First, the administrative effort required to manage compliance learning is high and thus, for efficiency reasons, is best supported by powerful technology. Second, the speed required for information dissemination (the learning side) as well as for reporting (high-quality, valid, reliable, and immediately reproducible auditing information) are hardly imaginable without the support of technology.

In this section, we describe three technology systems that can be used to support compliance:

- A learning management system (LMS)
- Learning content and documentation authoring tools
- An assessment management system

Learning Management System (LMS)

A learning management system (LMS) provides a variety of out-of-the-box functions needed for compliance learning.

Deploying an enterprise-class LMS should be a top priority for any enterprise in a regulated industry as well as in most other large enterprises.

An LMS is the technology of choice for managing key processes in compliance learning. This kind of solution has capabilities that allow organizations to:

- Manage registrations and tracking completions and attendance.
- Retain records about completion and attendance based on regulations.
- Manage resources and logistics for efficient delivery.
- Provide e-learning for self-paced learning and enable blended learning concepts.
- Control the versions of content, push out revised versions for retake by learners, and report which version a learner used for training.
- Identify training needs based on job role, location, business unit, and skill level, and push out courses accordingly.
- Notify users automatically about required course status, upcoming skill gaps, and retake needs.

- Provide automatic reassignment of courses to learners and recommendations for when to retake a course at predefined intervals.
- Enable progress, completion, and exception reporting.
- Enable managers by providing approval functionality and reporting for the business unit.
- Provide assessments to demonstrate that competency has been achieved.
- Maintain audit trails and electronic records of what was changed, when, and by whom, as well as previous and new values.
- Provide electronic signatures and certify implementation with the respective regulatory agency on regulations, such as FDA CFR Part 11.

Learning Content and Documentation Authoring Tools

For effective and efficient training on compliance topics, learning content is usually created by using authoring tools.

In recent years, it has become increasingly popular to use e-learning courses because these are more trackable and also easier to update, faster to roll out, and cheaper to deploy to larger audiences. There are different options for providing employees with learning materials when and where the materials are needed. Content can be shared in several flexible ways, including:

- Learning management systems using content standards such as Sharable Content Object Reference Model (SCORM) and Aviation Industry CBT [Computer-Based Training] Committee (AICC)
- Learning embedded in highly customizable business processes with documentation and interactive simulations
- Direct links to learning and documentation materials from inside applications through mobile devices to the mobile workforce
- Accelerated context-based guidance (pushing and pulling) directly in applications

Requirements for such authoring tools are as follows:

- Coverage of different learning methods and outputs – from documentation and handbooks to e-learning and social and mobile learning – is best handled using a single-source approach.



Typical standards such as SCORM or AICC need to be supported so that content can also be managed by an LMS. Enable progress, completion, and exception reporting.

- Content lifetime management so that content can be both easily created and updated.
- Performance management so that learning and guidance can be integrated into systems and processes used by employees when working.

Assessment Management System

Assessments are used:

- **Before compliance training** to diagnose who needs the training, establish benchmarks, and allow people who know the material to “test out” of training.
- **During compliance training** to provide help with direct learning, give feedback to employees and instructors, and provide retrieval practice.
- **After compliance training** to confirm competence, knowledge, or skills. This includes observational assessments to measure practical skills in the workplace, where an observer watches how an employee performs a task and rates performance against a checklist.
- **Independently of compliance training** to check competence, help find problems, and reduce errors before they happen.

An assessment management system allows companies to author, deliver, and report on assessments needed for compliance and other purposes, including learning, training, certification, and recruiting. An assessment management system also provides capabilities such as:

- Collaborative authoring of online exams, tests, quizzes, and surveys
- Blended, secure online delivery of exams, tests, quizzes, and surveys to desktops, mobile devices, or printed answer sheets
- Reporting and analytics for sharing test and assessment results with stakeholders

It's common to deliver assessments to employees regularly (quarterly, bi-annually, or annually) and require a passing grade at the assessment for employees to confirm their competence and continue in their job role. People who fail the assessment are given re-training and people who repeatedly fail may need to change job roles.

To use such assessments to make decisions about people's competence and to justify them to a regulator, companies should ensure:



Content validity

This ensures that test content reflects a person's knowledge, skills, or competence in what is required to do a job. The results of an assessment are only valuable and actionable if the questions match the needed skills. An assessment management system provides tools to manage reviews from subject matter experts and allow them to easily check question quality. It also provides capabilities for job task analysis surveys to determine the required competence in a job role.

Reliability

An assessment is reliable if it measures the same thing consistently and reproducibly over time. For an assessment to be reliable, there needs to be a predictable authoring process, effective beta testing of items, trustworthy delivery to all the devices used to give the assessment, good-quality post-assessment reporting, and effective analytics.

Fairness

An assessment must also be fair, so that it is not biased against some participants and is accessible to those with disabilities. Anti-cheating functionality is important to ensure fairness in an assessment management system.

Defensibility

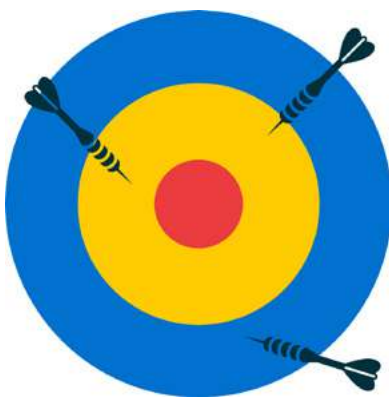
An authoring and assessment process must be legally defensible. If an employee complains that an assessment is unfair or a regulator is looking at assessment results and trying to determine if they genuinely show competence, companies must demonstrate a legally defensible process. For example, an assessment management system records the various changes and review steps during authoring questions to show that they were made properly.

Security

Assessments are only valid, reliable, and fair if they are secure. Proper security controls that restrict access to assessment content and results, and assure secure delivery help prove assessments are trustworthy.



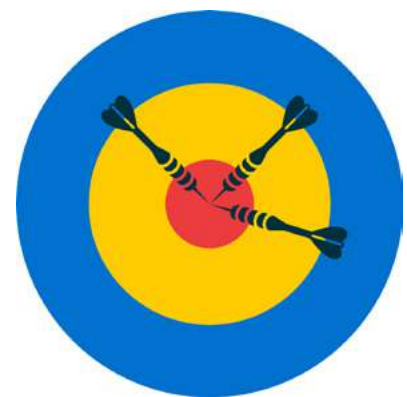
When thinking about reliability and validity, it can be helpful to think of a darts board. In the first diagram below, darts have landed all over the board – they are not reliably in any one place. In the second figure, the darts in the dartboard are in the same place, but not in the right place – this is reliable but not valid. In the last figure, the darts are in the same place and at the right place. This is analogous to a test which is reliable and valid. Trustable assessments must be valid and reliable.



Not reliable



Reliable but not valid



Reliable and valid

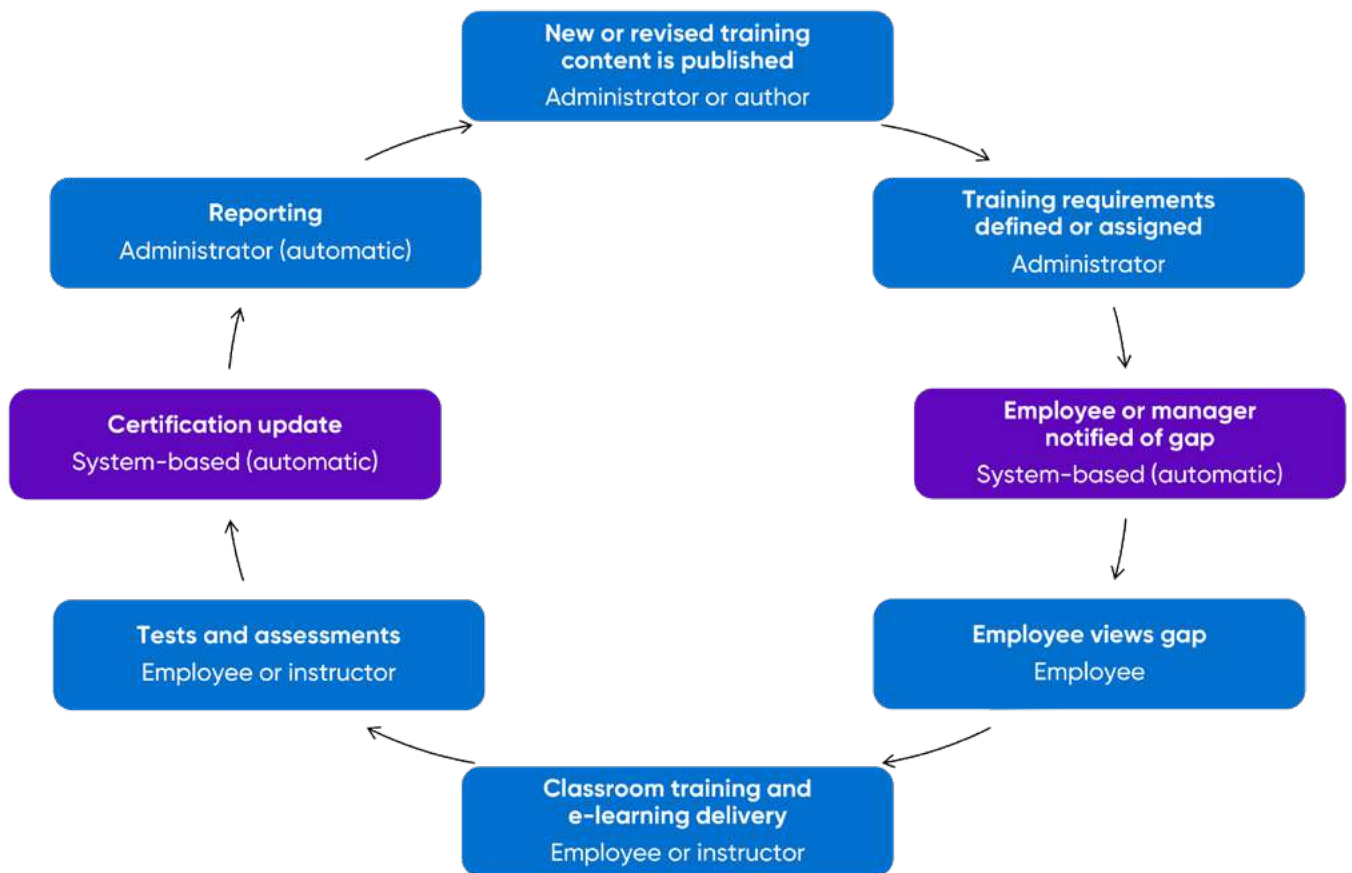
A typical LMS includes basic quiz and survey capabilities, but when making decisions about people, such as whether to promote, hire, fire, or confirm competence for compliance or certification purposes, companies need more.

The robust functionality of an effective assessment management system allows organizations to create reliable, valid, and more trustworthy assessments.

Assessment management systems and LMSs work together, and test-takers will often be directed to take assessments by using a single sign-on from the LMS.

Learning and Assessment Technology from SAP

How SAP SuccessFactors Learning Manages Compliance



SAP SuccessFactors Learning

As a learning management system, SAP SuccessFactors Learning has a proven track record for compliance learning in the market.

SAP SuccessFactors Learning combines formal, social, and extended learning with unmatched content management, reporting, analytics, and mobile abilities. The result is learning that



transforms the business and provides verifiable return on investment.

SAP SuccessFactors Learning consists of the following building blocks:

LMS functionality for managing learning more efficiently by housing learning activities in a single location to reduce costs and improve visibility. The activities include:

- Instructor-led training (ILT)
- E-learning
- Task-oriented on-the-job training (OJT)

Social learning for blending formal and social learning for achieving greater ROI, accelerating performance, and increasing learning retention. Companies can use the SAP Jam collaborative platform as part of social learning for:

- Mentoring and development
- Concept-oriented OJT
- Near real-time knowledge objects from subject-matter experts (SMEs)
- Collaborative groups and communities

Execution of premium tracking content management for SAP SuccessFactors Learning (Content-as-a-Service) for reducing costs, increase efficiency, and ensure that e-learning exceeds business results through:

- Content testing and management
- Distribution via Akamai content distribution network
- Content updates and maintenance

SAP SuccessFactors Learning Marketplace solution for facilitating a simple, comprehensive, and modern external training strategy that helps companies enable the business ecosystem to more effectively sell, support, service, and implement products or services.

SAP also offers the execution of analytics capabilities in SAP SuccessFactors Learning to improve compliance reporting. Companies can use the LMS functionality in SAP SuccessFactors Learning to



track, train, and automate required certification assignments.

In detail, SAP SuccessFactors Learning offers functionality such as automated learning assignments based on nearly any criteria, visibility into compliance training status and activities, and support for multipart e-signatures. It also provides for support for FDA 21 CFR Part 11, including validation requirements for the life sciences industry, and task-oriented OJT. It is a unique, validated software-as-a-service (SaaS) LMS and also ensures good practice quality guidelines and regulations (GxP).

The validated and stable cloud offering of SAP SuccessFactors Learning with its service-specific annual upgrade schedule guarantees stability and reliability needed for compliance processes while also enabling the necessary degree of innovation. This validated SaaS option comes with standard installation qualification (IQ) reports, with deliveries such as:

- Standard IQ audit reports with each update
- Technical and process documentation for the deployment system
- Independent annual Service Organization Controls Report (SOC 1) for audit compliance

SAP SuccessFactors Learning comes with a built-in test management tool to satisfy basic assessment needs for compliance. Customers who require additional features to manage their assessments may look to SAP Assessment Management by Questionmark, which can be conveniently integrated with SAP SuccessFactors Learning to enable a seamless business process.

How SAP Assessment Management by Questionmark Manages Compliance

SAP Assessment Management by Questionmark is an intuitive application that an organization can use to create valid, reliable, and trustworthy assessments for compliance purposes.

Test authors in distributed enterprises and locations can use browser-based authoring tools and a multilingual interface to collaborate and work together to make valid, reliable, and trustworthy assessments.



Authoring

SAP Assessment Management streamlines the authoring lifecycle. With its intuitive interface, a user can begin authoring questions and tests in minutes.

The software supports more than 20 question formats, such as hotspot, drag-and-drop, ranking, matching, and Likert scale. Standard configuration supports assessment delivery interfaces in more than 30 languages with an option for additional languages. The delivery platform accommodates a broad range of languages, including those requiring right-to-left display.

Item Banking and Accessibility

It's easy to organize a repository of test items into separate folders according to learning objective, curriculum, or competency to speed up the authoring process and provide meaningful results. Available font and contrast adjustment as well as navigation controls can help enhance accessibility of test content for candidates with disabilities.

Delivery

An assessment must also be fair, so that it is not biased against some participants and is accessible to those with disabilities. Anti-cheating functionality is important to ensure fairness in an assessment management system.

With SAP Assessment Management, organizations can author assessments once and deliver them securely virtually anywhere – on standard Web browsers for PC and Mac computers, as well as iOS and Android mobile devices. With this flexibility, an organization can create new options for using mobile devices to deliver medium- and high-stakes tests and exams in compliance. A responsive design means the software automatically adjusts to the device type. With integrated remote monitoring functionality, one can rate participants based on how well they perform specific tasks or demonstrate specific abilities.

SAP Assessment Management features a Web-services application programming interface and connector apps for convenient integration with the SAP software.

The reporting and analytics tools of SAP Assessment Management empower an organization with a



broad range of predefined reporting and analytics tools. These include item analysis, test analysis, survey reporting, and more that enable analyzing results and sharing them with stakeholders. The reporting and analytics help learning and training professionals determine:

- Are the items and assessments reliable and defensible?
- What is the competence by topic of individuals and groups of employees?
- Where are weaknesses and potential compliance errors?
- How did one group of test takers compare to another?
- How can a company demonstrate to a regulator that its employees are competent?

SAP Assessment Management is available in a cloud or on-premise edition and can be used standalone or integrated with LMSs.

How SAP Enable Now Manages Compliance

SAP Enable Now gives an organization's entire workforce the training and necessary information they need – whenever and wherever they need it – even on their mobile devices.

A central team can easily create and deploy context-sensitive user help, transaction documentation, training simulations, test scripts, and e-learning materials.

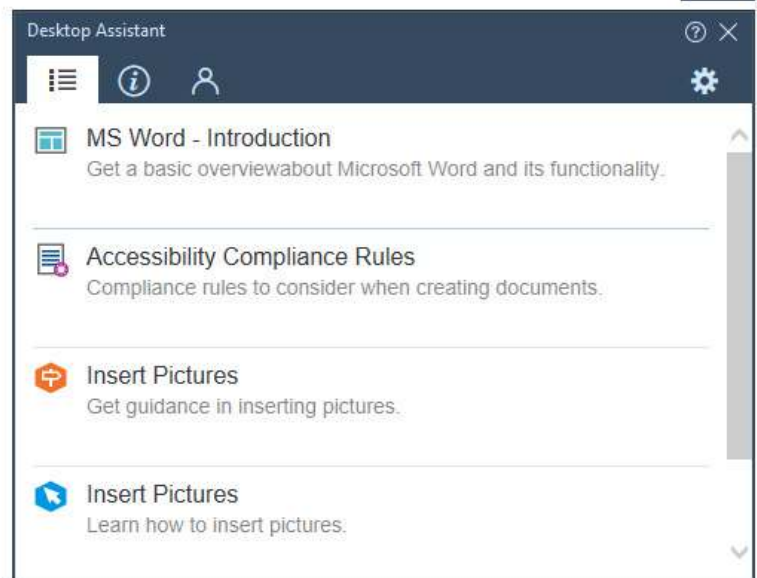
So how does it support compliance training? An organization can use this solution to create learning content such as e-learning courses and performance simulations, including test and certification programs or small quizzes, to train target groups on any compliance topic. This can be flexibly delivered to learners through SAP and third-party LMSs or through SAP Enable Now.

In addition to learning content, SAP Enable Now supports the generation of compliant process documentation with high-level automation achieved through audit and compliance macros to help ensure standardization. Each application or process can be automatically documented in just a few steps. If compliant process documentation needs to be in various languages, this can also be done very efficiently through automated rerecording and localization functionalities. Because SAP Enable Now uses single-source recording, one can directly create multiple output formats such as videos,

simulations, handbooks, and additional formats associated with documentation without any additional effort. By directly creating QR codes, it's easy to provide mobile access to any content created, making it easier to reach everyone within the extended workforce.

One more advanced way to support process compliance is through the performance support feature called "Desktop Assistant." Here compliance guidelines, additional information, and recommended values can be transferred and highlighted directly in the context of the respective application, process step, or object. For example:

- In the application process, guidance can help ensure that a process is executed according compliance rules.
- Updates to compliance regulations can be communicated in the relevant system.
- Important compliance notes can be automated. For example, in a finance transaction executed with SAP software, debt limits or leverage ratios can be displayed automatically.



Integration Makes It Stronger

When integrated, SAP SuccessFactors Learning directs participants to take an assessment within SAP Assessment Management.

Summary results are returned to the solution, and detailed results are stored and made available for reporting within the assessment management system. They can also be accessed in external reporting systems such as SAP Analytics and SAP BusinessObjects™ business intelligence solutions. Combining learning management with best-in-class assessment management to enable reliable, trustworthy assessments allows for a best-of-breed approach. Content created with SAP Enable Now can be integrated with SAP SuccessFactors Learning using standard methods such as SCORM formats or simple links.

Trends in Compliance Training and Assessments

The following are nine key trends in compliance training and assessments and how SAP is already addressing these requirements.

1. Predictive or forward-looking analytics

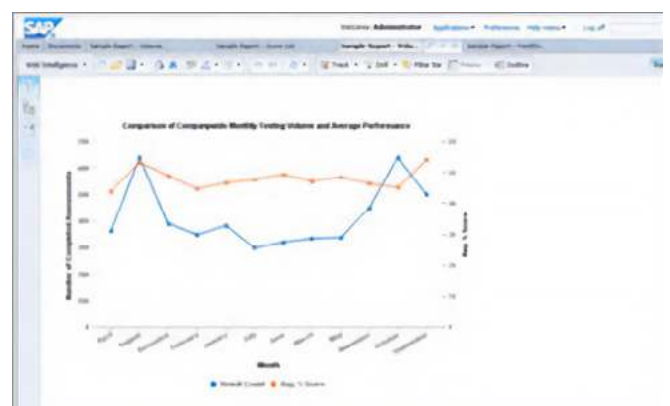
Many compliance measures, such as internal audits, inspections of what is happening, or training completion rates, are backwards looking. They tell what happened in the past, but don't tell about the problems to come. Companies can see clearly what is in their rear-view mirror, but the picture ahead of them is rainy and unclear. Giving the rise in regulatory risk described earlier, seeing ahead is important.



assessment data. SAP has the potential to combine Big Data from valid and reliable learning assessments with data from finance, sales, and HR sources.

SAP, with its leading assessment solution SAP Assessment Management by Questionmark and its powerful learning management system, offers world-leading approaches in this area. Both of these solutions can be integrated with unrivalled analytics solutions based on the SAP HANA® platform.

The following screenshot shows data exported using OData from SAP Assessment Management. It illustrates how performance and assessment results can be correlated using analytics solutions from SAP.



2. Data security compliance

In spite of increased investment in cybersecurity, the rise in data breaches shows no signs of data security and protection concerns are major priorities at most corporations. There are two aspects of this that impact compliance.

First, organizations that use third-party suppliers are keen to ensure they are trusted and have

Second, mistakes by people are one of the commonest causes of data security breaches. There is increasing focus in using learning and assessments systems like those from SAP in training and assessing on data security issues. Government regulatory agencies state that organizations must put in place risk-based security measures to ensure confidentiality and must regularly test, assess, and evaluate the effectiveness of these measures. They are also encouraging organizations to assess employee knowledge of their security procedures.

There is continued focus on data security and data protection when choosing compliant third-party suppliers. There is also an increased focus on compliance teams who ensure their workforce follow security and data protection procedures.

3. Increasing use of observational assessments

SAP expects there to be a growing use of observational assessments to help confirm that employees are following policies and procedures and to assess practical skills.

Observational assessments enable measurement of participants' behaviors, skills, and abilities in ways that traditional assessment can't. In a traditional assessment – for example, on a quiz, test, or exam – the participant is presented with questions for direct response.

In an observational assessment, an observer is presented with questions to rate participant behaviors, skills, and abilities, such as:

- Performance of a specific task or procedure
- Knowledge acquisition and application
- Demonstration of skills and abilities

With the increasing use of tablets and other mobile devices, it's becoming more practical to use mobile devices to assess competence while performing practical tasks, such as customer interviews, operating machinery, and working with patients.



4. Compliance training conducted on mobile devices

Mobile Internet use continues to increase globally at rapid rates. During 2016, it was reported that



there was more access from mobile devices than desktop and laptop computers.⁸

Use of tablets and other mobile devices is rapidly increasing in corporate environments, and it's becoming critical that compliance training, learning, and assessments be made available on tablets and smartphones, not just on PCs. SAP SuccessFactors Learning, SAP Enable Now, and SAP Assessment Management by Questionmark all work well on tablets and smartphones.

5. Informal learning

Increasingly, there is an understanding that workplace learning happens through the 70:20:10 model where:

- 70% comes from on-the-job learning (making mistakes, taking time for retrospectives, and learning from the experience)
- 20% comes from learning from others (mentors, conversations with peers, and meetings)
- 10% comes from studying (reading, researching, and taking courses)

When people are learning informally, it is still vital for regulatory compliance purposes to check that they have the knowledge and skills required to be competent in the job role. Well-managed assessments are and will remain important as informal learning becomes more prevalent. Informal learning is also aided by machine learning and artificial intelligence which seeks to provide faster paths to learning.

Machine learning may have a role in compliance learning and assessment, but due to the more conservative considerations in compliance will take some time to have impact.

6. Learning and compliance in the extended enterprise

Many compliance failures arise not due to an organization's own mistakes but because of a mistake by one of their suppliers or partners. Almost every organization relies on a network of third parties to conduct business and a critical issue for compliance offers is how to manage third-party risk.

In line with this, an important trend is the expansion of compliance learning to the extended enterprise, such as contractors, suppliers, and partners. SAP has addressed this need with SAP SuccessFactors Learning Marketplace, which combines SAP SuccessFactors Learning and SAP



e-commerce offerings to provide a modern, effective, and feature-rich tool to manage external learning in the cloud.

SAP SuccessFactors Learning and SAP Assessment Management by Questionmark both support the external enterprise and allow extending compliance learning and assessment to partners and other third parties.

7. Cloud

According to Forrester , the HR market generally is moving rapidly to the cloud, with SaaS HR solutions comprising 56% of the market in 2017, up from 36% in 2013. This is mirrored in compliance learning, training, and assessment – where the huge advantage of delegating all of IT to an outside party being the strongest compelling factor. Innovations, as well as rollouts to other locations and business units, can be leveraged much faster in cloud environments. Especially for compliance functions, the cloud offers a very flexible way to manage learning and assessment without requiring complex integrations or alignments with a company's training departments or related functions. Companies can achieve cloud deployments easily and quickly. It requires less corporate IT bandwidth and is usually more reliable, scalable, and secure.

Some organizations prefer to keep compliance training "behind the firewall." For such organizations, SAP offers SAP Learning Solution and the on-premise edition of SAP Assessment Management by Questionmark. Other corporations see the benefit of using the cloud, and SAP can offer SAP SuccessFactors Learning with the cloud edition of SAP Assessment Management by Questionmark.

See scn.sap.com/community/erp/hcm/blog/2013/05/02/on-demand-or-on-premise-which-is-better-for-hcm for a blog written by one of this paper's authors offering more information on the pros and cons of using the cloud for HCM.

8. Changing workforce needs

The workforce is constantly changing. The millennial generation, or Generation Y, expects different things from previous generations in the way that they use technology and fit into corporate society. People from Generation Z (also called the iGeneration, those born between around 1995 and 2010),

are entering the workforce around now. They are often highly connected, having had a life-long experience with social media and being fully “digital natives.”

To meet the needs of such workers, SAP is increasingly using “gamification” in compliance training to help motivate and connect with employees. And the entire workforce is now accustomed to seeing high-quality user interfaces in consumer Web sites and expects the same in their corporate systems.

9. Big Data

Increasingly, SAP understands how to connect disparate data sources and analyze large quantities of structured data, unstructured data, and other Big Data. Tools like the SAP HANA application increase the ability to get meaning out of large quantities of data, and SAP expects the increasing use of Big Data analytics to provide meaning and value in compliance training and assessment. Imagine the use of analytics (as described previously in trend 1) in leveraging Big Data to create alerts for compliance officers and managers or for statistical research that can help companies avoid future compliance issues.

There is huge potential for Big Data in learning, training, and assessment for regulatory compliance, and the use of SAP software has potential to be an efficient, safe, and reliable “driver” to take companies there.





Conclusion

Benefits of Digital Badges

This report showcases the business drivers for compliance learning, training, and assessment and how increased regulations and regulatory activity have made this a high priority for most large organizations.

Technology is an important tool to mitigate regulatory risk in this area, and the white paper has described three types of technology that can help:

- A learning management system which can manage key processes in compliance learning.
- Learning content and documentation authoring tools to help deliver the training.
- An assessment management system which can check workforce competence in a trustable way.

SAP provides SAP SuccessFactors Learning, SAP Enable Now, and SAP Assessment Management by Questionmark as solutions to customer needs in this area, and the three solutions work together to enable effective compliance training and assessment.

Finally, the white paper has explained some trends in compliance training and how the SAP solutions provide a way of delivering effective compliance training and assessment taking account of the trends.

For SAP contact details, please see [sap.com](https://www.sap.com)

To understand how Questionmark can help with online assessments, talk to us at [questionmark.com/demo](https://www.questionmark.com/demo)



Appendix

Sources

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Appendix

SAP Resources

Here is some further reading about learning and assessments in regulatory compliance.

- SAP Education offerings: sap.com/training-certification.html#solutions
- SAP Enable Now: sap.com/products/enable-now.html
- SAP SuccessFactors Learning: successfactors.com/en_us/solutions/bizx-suite/talent-solutions/learning.html
- SAP SuccessFactors Learning and validated SaaS information for 21 CFR Part 11 requirements: successfactors.com/content/dam/successfactors/en_us/resources/brochures-product/successfactors-lms-validated-saas.pdf
- SAP Assessment Management by Questionmark: sap.com/products/assessment-authoring.html
- SAP white papers: successfactors.com/en_us/resources.html?documentTypes=white_papers
- “How do we work and learn in the future?” blog: blogs.sap.com/2017/03/30/how-do-we-work-and-learn-in-the-future/

Questionmark Resources

Best practice guidance from Questionmark

Questionmark publishes several other white papers giving best practice guidance, available from questionmark.com/resources/reports/. The following white papers are useful for follow-up reading:

- [Assessment Results You Can Trust](#)
- [Five Practical Approaches to Test Beyond Recall](#)
- [The Test Fraud Fallacy](#)

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