



## **System and Organization Controls (SOC) 3 Report**

Report on the Board's cloud system relevant to Security and Availability,  
for the period July 1, 2019 through December 31, 2019



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**INDEPENDENT SERVICE AUDITOR'S ASSURANCE REPORT**

## Independent Service Auditor's Assurance Report

To the Board of Directors of  
Board International SA

We have examined Board International SA Service Organization's (Board 's) accompanying assertion titled "Assertion of Board International SA " (assertion) that the controls within Board Cloud System (system) were effective throughout the period July 1, 2019 to December 31, 2019, to provide reasonable assurance that Board's service commitments and system requirements were achieved based on the trust services criteria relevant to security and availability (applicable trust services criteria) set forth in TSP section 100, 2017 Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy (AICPA, Trust Services Criteria).

### Service Organization's Responsibilities

Board is responsible for its service commitments and system requirements and for designing, implementing, and operating effective controls within the system to provide reasonable assurance that Board's service commitments and system requirements were achieved. Board has also provided the accompanying assertion about the effectiveness of controls within the system. When preparing its assertion, Board is responsible for selecting, and identifying in its assertion, the applicable trust service criteria and for having a reasonable basis for its assertion by performing an assessment of the effectiveness of the controls within the system.

### Service Auditor's Responsibilities

Our responsibility is to express an opinion, based on our examination, on whether management's assertion that controls within the system were effective throughout the period to provide reasonable assurance that the service organization's service commitments and system requirements were achieved based on the applicable trust services criteria. Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Our examination was also performed in accordance with the International Standard on Assurance Engagements (ISAE) 3000 issued by the International Auditing and Assurance Standards Board ("IAASB"). Those standards require that we plan and perform our examination to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Our examination included:

- Obtaining an understanding of the system and the service organization's service commitments and system requirements
- Assessing the risks that controls were not effective to achieve Board's service commitments and system requirements based on the applicable trust services criteria
- Performing procedures to obtain evidence about whether controls within the system were effective to achieve Board's service commitments and system requirements based the applicable trust services criteria

Our examination also included performing such other procedures as we considered necessary in the circumstances.

### Service auditor's independence and quality control

We have complied with the independence and other ethical requirements set forth in the Preface: Applicable to All Members and Part 1 –Members in Public Practice of the Code of Professional Conduct established by the AICPA and applied the AICPA's Statements on Quality Control Standards.

We have also complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

### Inherent Limitations

There are inherent limitations in the effectiveness of any system of internal control, including the possibility of human error and the circumvention of controls.

Because of their nature, controls may not always operate effectively to provide reasonable assurance that the service organization's service commitments and system requirements were achieved based on the applicable trust services criteria. Also, the projection to the future of any conclusions about the effectiveness of controls is subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

### Opinion

In our opinion, management's assertion that the controls within Board's Cloud System were effective throughout the period July 1, 2019 to December 31, 2019, to provide reasonable assurance that Board's service commitments and system requirements were achieved based on the applicable trust services criteria is fairly stated, in all material respects.

EY S.p.A.



31 March, 2020  
Milano, Italy



## **MANAGEMENT ASSERTION**



## ASSERTION OF BOARD INTERNATIONAL SA

We are responsible for designing, implementing, operating, and maintaining effective controls within Board International SA Service Organization's (Board's) Board Cloud System (system) throughout the period July 1, 2019 to December 31, 2019, to provide reasonable assurance that Board's service commitments and system requirements relevant to security and availability were achieved.

Our description of the boundaries of the system is presented in attachment A and identifies the aspects of the system covered by our assertion.

We have performed an evaluation of the effectiveness of the controls within the system throughout the period July 1, 2019 to December 31, 2019, to provide reasonable assurance that Board's service commitments and system requirements were achieved based on the trust services criteria relevant to security and availability (applicable trust services criteria) set forth in TSP section 100, *2017 Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy (AICPA, Trust Services Criteria)*.

Board's objectives for the system in applying the applicable trust services criteria are embodied in its service commitments and system requirements relevant to the applicable trust services criteria. The principal service commitments and system requirements related to the applicable trust services criteria are presented in attachment B.

There are inherent limitations in any system of internal control, including the possibility of human error and the circumvention of controls. Because of these inherent limitations, a service organization may achieve reasonable, but not absolute, assurance that its service commitments and system requirements are achieved.

We assert that the controls within the system were effective throughout the period July 1, 2019 to December 31, 2019, to provide reasonable assurance that Board's service commitments and system requirements were achieved based on the applicable trust services criteria.

**Board International SA**

*March 31, 2020*



**ATTACHMENT A: Board Service Organization's Description of the Boundaries of the Board Cloud System**





## BOARD SERVICE ORGANIZATION'S DESCRIPTION OF THE BOUNDARIES OF THE BOARD CLOUD SYSTEM

### Company Overview and Background

Board International SA ("Board" or the "Company"), founded in 1994, provides a software to support the decision-making processes of any corporate function and industrial sector. Board offers its all-in-one platform both on premise and as a Software-as-a-service (SaaS), unifying in a single software platform the functions of modelling and analysis of data typical of "Business intelligence", the simulation and planning functions of "Performance Management" and predictive analytics. The SaaS solution is flexible, scalable and secure, and it is backed by Microsoft Azure. With Board, customers can analyse, simulate, plan and forecast, taking advantage of a highly customizable software platform.

### Board Cloud (SaaS)

Board Cloud is a SaaS (Software as a Service) version of the Board platform. Powered by Microsoft Azure, Board Cloud reduces both setup time and maintenance overheads of your BI, EPM and Predictive Analytics applications by offering world-class security, reliability, scalability and performance.

Board Cloud's globally spanning infrastructure supports enterprise level rollouts by providing robust levels of integration with various systems such as ERP, CRM, Cloud applications, and Data Warehouse.

Board Cloud provides one (or more) production environment(s) with the possibility to activate one or more Sandbox environments for use as Development, User Acceptance Test, Pre-production instances depending on Customer's project requirements and policies. Access to a Cloud Administration portal is also given to each Board Cloud customer enabling them to be fully self-sufficient with regards to administering and managing their Board Cloud environment.

Board Cloud helps companies deploy global rollouts by assisting organizations in the following areas:

- Simplifying business models
- Standardizing global processes
- Deploying across an industry standardized platform and interfacing technologies.

Board Cloud is available in different languages, such as English, French, German, Spanish, Italian, Chinese, Japanese. Moreover, Board's translation mechanism enabling users from different countries to see the same application dimensions and measures in a language familiar to themselves.

User access to Board Cloud is easily achieved through all common Web Browsers from different kinds of devices (tablets, notepad, smartphones etc.), using a secure, encrypted HTTPS connection.

Board Cloud enables seamless connections to On-premise, Hybrid and Cloud data sources through its industry leading connectivity technology without the need for complex configuration on Customer source systems.

### Board Services

Board provides services to its customers through two main departments: The Technical Support department and the Professional Services department. The Technical Support team delivers support services strictly related



to the use of the Board technology, how it is configured in the customer's environment and how it can be optimized for the specific customer's application. The team is made of technicians and engineers that generally liaise with the customer's IT personnel on technical matters of integration and optimization.

The Professional Services team delivers consulting services relating to the business application the customer requires. This team is made of functional consultants and domain experts that help customers in translating their functional requirements in Board analytical applications. The team also delivers, through a Quality Assurance process, the implementation of Board solutions that are fit for purpose, performing under all conditions, in a secure and reliable manner.

## Infrastructure

Board Cloud relies on MS Azure services and Data Centers. Microsoft's data centers are designed to provide 99.999% availability to meet SLAs and customer service needs. Microsoft's global data center portfolio enables you to provide the right data center capacity at the right time to meet the specific daily service needs.

The clear and successful cloud strategy of Microsoft with its strong orientation to serve the enterprise and government markets were key decision factors for Board. The choice of exclusively using MS Azure has been carefully evaluated in all its aspects (from quality, robustness and performance of the services to global coverage and financial stability of the supplier) and is deemed as a competitive advantage to serve the enterprise target market of Board.

The Board Cloud architecture has been designed with the objective of creating a highly secure, reliable, scalable and flexible environment for Board and its customers.

The main components of the Board Cloud network architecture are:

- the monitoring network: a "super network" used by monitoring tools to constantly control the health of each single customer's end-point.
- the data-center network which embraces all Board customer's services residing in a given data center and allows to manage in an efficient and secure manner all software services, virtual machines, storage services, sub-networks of that data-center.
- the customer's sub V-Net which is a segregated sub-network that isolates each customer from one another.

Within each sub V-Net, customers have dedicated services: micro-services, web-apps, data services, virtual machines, storage areas. This architecture approach provides the following benefits:

- Security: Complete separation ensuring isolation of all customers' data.
- Reliability: The performance of one customers' instance will never be impacted by activity on another Board Cloud Customer.
- Geographic redundancy: All customer data is replicated across a Primary and Secondary Azure data center offering failover in the event of a major outage at the primary DC.
- Version Isolation: Customers can upgrade their Cloud instance when they need it independent of all other customer upgrade activity.



## Software

The Board platform is a set of tightly integrated software programs designed for the development and rollout of BI and EPM solutions.

The Board software is fully developed using modern programming languages such as C# and TypeScript and based on the Microsoft ".Net" Framework. It adopts the highest industry standards for the security layers of the platform in order to grant the highest levels of security for authentication and encryption.

The platform architecture is made of several layers: a back-end layer with a multidimensional database engine, a data processing engine for aggregations, transformations and simulations, and finally a front-end layer for data presentation and user interactions.

The multidimensional database engine allows to load data from multiple sources and consolidate it into a unified data-model. The database engine uses in-memory computing and MPP (massive parallel-processing) capabilities to deliver high performance on analytical queries over very large amounts of data. The "Rules" and "DataFlow" engines allow to transform data and calculate new data for implementing business models with aggregations, allocations, statistical forecast and data-mining algorithms. The Board platform also includes a presentation layer, the "Capsules" environment, that allows to build visual representations of data with tables, charts, gauges and a variety of interactive objects. Capsules can be used to create reports, dashboards or complex analytical applications deployed to hundreds or thousands of business users, business analysts and decision makers. The presentation layer is a Single-Page Application built on HTML5 that can be accessed from any modern browser running on desktops, laptops, tablets and smartphones.

## People

Board has designed the organizational structure to provide quality service and accountability in support of Board's mission.

Board people are strongly committed in achieving the Company objectives, and the organizational structure support the activities for achieving the planned goals.

Board operations are highly specialized and require the ability to adapt to changes in the industry and best practices.

The Senior Management is an active participant in day-to-day operations. Organizational charts are in place to communicate key roles, responsibilities, and appropriate lines of reporting to personnel, in particular for the employees involved in the design, development, implementation, operation, maintenance, and monitoring of the Board applications and infrastructure that supports the System.

The Board staff provides support for the above services in each of the following functional areas:

- Chief Technology Officer (CTO) - plans the development of Board Product and Board Cloud Services, deciding the priorities, according to Firm management, the resources, the budgets and the goals of the Firm. The CTO collaborates with the responsible of the user functions to define the automatization of information systems. He has the responsibility to maintain the standards of information security.
- Research & Development Team (R&D) – responsible for design and delivery of the product roadmap, secure and stable applications and incident and bug resolution. The R&D Team is responsible for change management, monitoring for issues and events, delivering a responsive system that fully complies with the functional specification.
- Cloud Operations Team - responsible for the architecture of the Services across the MS Azure environment, deployment in cloud environments and for the design and implementation of adequate



and appropriate measures for ensuring that security and confidentiality requirements are met. The team is in charge to cloud adoption plans, cloud application design, cloud management and monitoring.

- System Administrator - responsible for the effective provisioning, installation/configuration, operation and maintenance of system hardware and software relevant to the system. The system and information owners are responsible for ensuring that proper controls are in place to address integrity, confidentiality and availability of the IT Systems and data they own.
- Support Team – serves customers by providing product and services information that includes resolving product and service issues.

Integrity and ethical values, as well as the way they are communicated, monitored and enforced in business activities, are fundamental elements of the Board's control environment and vision that influence the design, administration and monitoring of key processes.

The expectations of the Company concerning integrity and ethical values are reaffirmed by Senior Management who highlight the importance of an ethical right behavior.

This responsibility is characterized and reflected in the Board "Code of Ethics".

Board requires employees and suppliers to formally adhere to the requirements of Board Code of Ethics and transparency.

Board is committed to ensuring a positive, constructive and dynamic working environment that supports the heterogeneity of people and their talents, opinions and points of view, guaranteeing equal opportunities for all based on the principles of impartiality and meritocracy.

The Company follows a structured on-Boarding process to assist new employees as they become familiar with tools, processes, systems, policies and procedures. During the on-Boarding, the new employees are informed about the commitment of Board to information security and privacy.

All employees are trained and tested on a Continuous Security Program that creates awareness and builds a culture of Information Security. The Information Security training includes, but is not limited to, the following topics: general security concepts, information classification, email and phishing attacks, social engineering threats, secure coding, vulnerabilities testing.

## Data

The Customer is the exclusive owner of the Customer Data loaded on the System and Board does not process customer's data. Cloud Operations team does not have access to customer data except with the prior written consent of the Customer. Even in this case (written authorization is provided), the Cloud Operations team personnel can't access the data content if the Customer has enabled data encryption: the data volume can be moved from one site to another or can be deleted, but it can't be viewed or read by Board Personnel.

Physical and logical access to customer's systems containing customer data is limited to the support personnel required to have such access.

The Company evaluates data as an important asset and protects it according to the security requirements set-out by both law and international standards.

Board is actively involved in protecting information asset and addressed the key pillars of information security (i.e. confidentiality, integrity and availability) in managing both internal data and information received by or produced for Third Parties.

Regarding the customer information, Board is committed in processing only the information needed for the



service delivered (e.g. service provisioning, professional services, etc.) and retaining them for the period needed for managing the entire related process.

## Procedures

Policies and procedures have been developed by Board to formally define its risk management posture and establishes its internal control system. The overall system is managed by each department's Key Responsible supported by the Compliance & Audit Executive.

All policies are kept up to date, reviewed and approved on an annual basis, or more frequently as necessary (for example, based on an updated risk assessment).

Board has developed a wide Information Security Management Framework for Board Cloud Services aligned with the ISO/IEC 27001, with defined key role and responsibilities. The Information Security Officer (ISO) has overall responsibility for Board's security framework.

Included in the framework are policies, standards and procedural documentation relating to security and availability of information and information systems.



**ATTACHMENT B: Principle Service Commitments and System Requirements**



## PRINCIPLE SERVICE COMMITMENTS AND SYSTEM REQUIREMENTS

Board designs its processes and procedures related to the Board application to achieve its goals for services provided through the cloud environment. These goals are based on Board's service commitments to user entities, the laws and regulations governing the provision of its services provided through the cloud environment, and the financial, operational and compliance requirements that Board has established for services.

Security commitments to user entities are documented and communicated through the Board SaaS agreement and Service Level Agreements (SLAs). The security commitments are standardized and include, but are not limited to, protection against unauthorized access, use or modification of the system. Information security policies and procedures define how systems and data are protected.

The availability principles inherent to the Board Cloud System are designed to ensure availability of the SaaS service, in compliance with the SaaS agreements and SLAs. Processes and procedures are defined to protect, respond to and recover from events or incidents relating to availability, incorporating elements of business continuity and disaster recovery.

Board establishes the operational requirements that support the achievement of security and availability commitments, relevant laws and regulations, and other system requirements. These requirements are communicated in the Board's system policies and procedures, system design documentation and customers agreements. Information security policies define an organization-wide approach to how to protect systems and data.

Board's Information Security framework includes policies on how the service is designed and developed, how the system is managed, how internal business systems and networks are managed, and how employees are recruited, trained and evaluated. In addition to these policies, standard operating procedures have been documented on how to perform specific manual and automated processes required in the operation and development of the Board Cloud System.