

Spillemyndigheden's Certification Programme

Change Management Programme

SCP.06.00.EN.1.1

**Spillemyndigheden's Certification Programme
Change Management Programme**

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1 Objectives of the change management programme

The change management programme ensures that all changes to the gambling system are conducted to this set of standards, hereby seeking an adequate quality for the implementation of changes. The programme ensures transparency in relation to changes to the gambling system and the decision process behind those changes.

1.1 Scope of this document

This document contains the requirements specifying how testing organisations obtain accreditation for conducting certification of the gambling system, business processes and business systems of the licence holder as well as instructions on how to conduct the certification. The requirements concerning accreditation of the testing organisation and certification of the licence holder can be found in section 2 "certification".

The licence holder shall have a number of basic functions and procedures in place as the foundation for its change management programme. These functions and procedures are described in section 3 "Change Management Framework".

All changes to the gambling system shall be described, evaluated and approved before being implemented into the gambling system. This process is described in section 4 "Change Management Process".

The licence holder shall be capable of creating a number of reports concerning the gambling system and these are described in section 5 "Reports from the component register and the change log".

In certain situations Spillemyndigheden must be notified about a change or in some cases have to approve the change before implementation. These situations are described in section 6 "Prior approval of change from Spillemyndigheden".

1.2 Version

Spillemyndigheden will continuously revise the certification programme, making the latest version and the version history accessible at Spillemyndigheden's website: <https://spillemyndigheden.dk/en/certification-programme>

| Date | Version | Description |
|-------------|----------------|--|
| 2014.07.04 | 1.0 | A new document structure than the previous version 1.3 alongside with a range of updates in different areas. A new version 1.0 is therefore published. It is the intention to follow normal versioning for future changes. |
| 2015.12.21 | 1.1 | Changes completed to implement requirements for lotteries in the certification programme. |

Spillemyndigheden will publish guidelines regarding the validation of existing certifications together with previously performed inspections and tests, when new versions of the certification programme is released.

It is important to emphasise that only the Danish version is legally binding and that the English version holds the status of guidance only.

1.3 Applicability

The Change Management Programme is applicable for offering of:

- Online betting
- Land based betting
- Online casino
- Lotteries (§ 6 in the gambling act), section 6.2 in this document is not applicable for lotteries

2 Certification

2.1 Certification frequency

The licence holder is responsible to ensure to be certified in accordance with the requirements in this document with an interval of maximum of 12 months.

2.1.1 Initial certification

The licence holder must, as a rule, be certified before a licence to offer games can be issued, unless Spillemyndigheden has informed otherwise.

2.1.2 Renewed certification

The licence holder must, as a rule, have completed a new certification within 12 months of the latest certification. The standard report must reflect, when the certification has been renewed.

The licence holder can choose to postpone the certification up to two months from the time where a new certification should be completed. The new certification must be finalised no later than 14 months after the latest certification and the standard report must be submitted to Spillemyndigheden within the same deadline. Use of this postponement requires that the testing is commenced within 12 months of the latest certification.

Spillemyndigheden must be notified before the certification is postponed.

The deadline for renewal of certification is shortened with the equally amount of time the former 12 month deadline has been postponed. Meaning that if you for instance make use of the maximum two months postponement, then the next certification is due 10 months later. The time for the next certification shall be reflected in the standard report.

2.1.3 Quarterly reports

Additionally a report compiling the changes made to the gambling system the past three months, the ongoing certifications, and other relevant information shall be submitted to Spillemyndigheden every three months.

2.2 Accredited testing organisations

Testing organisations shall attain ISO/IEC 17020 accreditation and/or ISO/IEC 17025 accreditation based on the criteria described in the following sections. The scope of the accreditation shall be extended to include 'Spillemyndigheden's certification programme – SCP.06.00.EN.1.1'.

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The accreditation will be undertaken by DANAK, the Danish Accreditation and Metrology Fund, or a similar accreditation body being covered by the multilateral agreement on reciprocal recognition of the European Co-operation for Accreditation or a member of the International Laboratory Accreditation Cooperation.

To ensure that the necessary qualifications are in place during the certification the testing organisation and their staff shall fulfil the following requirements. Documentation that the requirements are fulfilled shall be enclosed with the certification.

2.2.1 Requirements for accredited testing organisations

The accrediting testing organisation:

- a) Shall have at least three years' experience in testing gambling systems or a similar closely related subject area,
- b) Shall work on the basis of the ISO/IEC 17020 accreditation and/or ISO/IEC 17025 accreditation, which refers to the requirements of SCP.06.00.EN.1.1, and
- c) Shall ensure that staff with sufficient qualifications will carry through the certification.

2.2.2 Requirements for personnel at the accredited testing organisations

The certification shall be carried through by staff with sufficient qualifications cf. sections 2.6.1 above. Work done in relation to the certification shall be supervised and the declaration of certification shall be attested by one or more persons who warrant(s) that the work has been carried out to adequate professional standards. These persons shall meet the following requirements:

- a) Shall have a relevant education background or be able to prove relevant qualifications in other ways,
- b) Shall be certified as:
 - International Information Systems Security Certification Consortium (ISC)² Certified Information Systems Security Professional (CISSP),
 - Payment Card Industry (PCI) Qualified Security Assessor (QSA), or
 - Information Systems Audit and Control Association (ISACA) Certified Information Systems Auditor (CISA).
- c) The supervisor referred to in a) and b) above shall have five years of professional experience in testing gambling systems or a similar closely related subject area.

Guidance: Certification and attestation can be carried out by staff who in conjunction fulfil the requirements.

3 Change Management Framework

This general framework for managing changes to the gambling system sets out the necessary foundation needed for the implementation of a change management programme. It requires the licence holder to:

- delegate responsibilities and authorities in relation to change management,
- create a formal change plan defining the structure for change management,
- identify and classify the components of the gambling system for the configuration management,

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- record changes in a change log, and
- determine a configuration baseline for the gambling system in its entirety.

When classifying components it may be relevant to consider the differences between the games and the game types as well as the different risks involved.

3.1 Change Management Responsibility

3.1.1 Change Management responsibilities of the licence holder

The licence holder is responsible for changes in its gambling system irrespective of whether such changes have been carried out by the licence holder or a third party on behalf of the licence holder.

The licence holder shall clarify and define responsibilities and authorities with regards to the implementation and approval of the change process. If the gambling system changes are managed by one of the licence holder's suppliers, the licence holder shall ensure that the supplier carries out equal procedures and that these procedures comply with the requirements of this document.

3.1.2 Personnel responsible for Change Management

The licence holder shall appoint one or more people among its staff to take overall responsibility for system changes. The responsible personnel may be organised as a committee.

The responsible personnel shall possess sufficient proficiency and experience in change management and hold the necessary authority within the licence holder's organisation to make decisions with regards to change management.

The responsible personnel shall involve other relevant staff members at the licence holder and/or at the relevant supplier(s) in the decision process in order to ensure changes of high quality.

Prior to the approval of a system change the responsible personnel shall confirm that:

- the proposed system change is consistent with Spillemyndigheden's Certification Programme,
- the proposed system change is necessary,
- the proposed system change has been carefully considered, documented and categorised,
- the consequences of implementing the change does not compromise the integrity of the gambling system, and
- the process for the planned actions when implementing the system change in documentation, hardware and/or software is consistent with section 4 of this document.

This, along with who has been involved in the decision making process, shall be recorded in the change log cf. section 3.4.

3.2 Change Management Planning

The change management of the licence holder shall be documented in a change management plan which sets out the overall framework for managing system changes.

The change management plan of the licence holder shall:

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- be documented,
- be approved by senior management,
- be subject to sufficient internal control,
- identify the configuration management procedure to be used cf. section 3.3,
- describe the responsibilities and authorities of the personnel in relation to changes to the gambling system and its components as well as ensure that the lifecycle of components is described,
- integrate with the change management plans of suppliers,
- establish the delegation of responsibilities between licence holder and supplier, and
- make reference to relevant procedures of the licence holder and supplier whenever possible.

3.3 Configuration Management

The licence holder shall use a degree of configuration management which creates an overview of the gambling system by identifying the individual components. When the components have been registered and classified in the component register cf. section 3.3.2 the configuration baseline is created cf. section 3.5 which ensures the possibility of identifying changes to the gambling system in future certifications.

The configuration management set out in this document is meant to supplement the existing configuration management used by the licence holder.

If the licence holder is not subjecting the gambling system to any configuration management then this document is to be considered the minimum requirements for configuration management.

3.3.1 Structure of the gambling system and definition of components

The structure of the gambling system is comprised of the defined hardware and software components and the inter-relationships and -dependencies of the components.

The components shall be defined in the component register cf. section 3.3.2 based on whether their functional and physical characteristics can be managed separately.

The definition shall be based on:

- regulatory requirements,
- criticality in terms of risks to confidentiality, integrity, availability and accountability cf. section 3.3.3,
- new or modified technology, design or development, and
- interfaces with other components.

The objective of defining the components is to optimise the ability to control the development process of the gambling system. The definition of components shall be initiated as early as possible in the component's lifecycle and be reviewed on a continuous basis during the development of the component.

3.3.2 Registration of components in a component register

The licence holder and their suppliers shall register all defined components in a component register.

The licence holder and their suppliers are free to set the level of detail in the component register. If the level of detail is very low – e.g. if the gambling system is the only component – then any change to this

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component would require a very high degree of management and control. A high level of detail would make it possible to scale the degree of management and control according to the significance of the individual component's role in the gambling system.

The following information shall be registered on each component:

- the definition of the component,
- a unique identification number,
- version number,
- identifying characteristics,
- the owner responsible for changes to the component,
- classification in relation to confidentiality, integrity, availability and accountability cf. section 3.3.3,
- Checksum/Hash value for components classified as (substantial relevance), cf. section 3.3.3 and
- the geographic location if the component is a hardware component.

This information shall be the foundation on which the accredited testing organisation can inspect whether the component has changed compared to the configuration baseline cf. section 3.5.

3.3.3 Classification of components

All defined components shall be classified against the following four criteria:

- Confidentiality; confidential information concerning the customer (e.g. identification and transaction information).
- Integrity; the integrity of the gambling system, its functionality and the information stored in the gambling system.
- Availability; the availability of information concerning the customer.
- Accountability; user activity (including customers, personnel and third parties) in relation to the component.

Each component shall be assigned a relevance code on the scale below based on the component's role in achieving or ensuring each of the above criteria:

- 1; no relevance (the component can have no negative impact on the criteria),
- 2; some relevance (the component can have an impact on the criteria), and
- 3; substantial relevance (the criteria is related to or dependant on the component).

The highest relevance code of the four criteria determines the classification of the component.

3.3.4 Classification of hardware components in virtual servers (cloud)

If the licence holder is using a virtual server environment, this may affect the classification as described in section 3.3.3 of these hardware components.

3.3.4.1 Private virtual server environment

In situations where the licence holder is using a private server environment to support the gambling system, the supporting hardware shall have adequate redundancy and capacity, to ensure continuous performance of the system despite malfunction of individual hardware components, thus ensuring continuous

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and uninterrupted performance of the gambling system until the error has been rectified. In this situation it is allowed to classify the hardware components with a lower relevance code, cf. section 3.3.3.

In situations where the combined physical hardware, supporting the virtualisation layer, does not have adequate redundancy and capacity to mitigate malfunction of individual hardware components, and thus cannot ensure continuous and uninterrupted performance of the gambling system until the error has been rectified, then the individual hardware components shall be classified with a higher relevance code, cf. section 3.3.3.

3.3.4.2 Public server environment

In situations where a supplier is supporting the licence holder with a virtual server environment (cloud), hardware components in the server environment shall not be classified according to section 3.3.3, when the supplier is fulfilling the following conditions:

- The supplier must not be a part of the licence holder's concern or in any way connected to the licence holder's business
- Is certified according to ISO/IEC 27001
- The hardware supporting the virtual server environment, shall have adequate redundancy and capacity, to ensure continuous performance of the system despite malfunction of individual hardware components, thus ensuring continuous and uninterrupted performance of the gambling system until the error has been rectified.

3.4 Recording changes in a Change Log

All changes to the gambling system shall be recorded and dated in a change log. The change log shall be the foundation on which the accredited testing organisation can inspect the changes done to each specific component compared to the configuration baseline cf. section 3.5.

3.5 Configuration baseline of the Gambling System

The configuration baseline is established during the initial certification of the licence holder as the certified gambling system in its entirety.

The configuration baseline enables the accredited testing organisation to inspect all changes to the components in such a manner that upon the yearly re-certification a complete audit trail exists back to the initial configuration baseline.

As part of the yearly re-certification a new configuration baseline is established and this will serve as the baseline for the changes during the following year.

4 Change Management Process

All system changes shall be controlled. The degree of control depends on the impact the change is expected to have on the gambling system.

The change management process shall be documented in the change log cf. section 3.4 and the documentation shall include:

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- a description of the change,
- a classification of the change in terms of complexity, resources and scheduling,
- a justification for the change cf. section 4.1,
- an evaluation of the change cf. section 4.2,
- a description of how the change shall be approved cf. section 4.3, and
- a description of how the change shall be implemented and verified cf. section 4.4.

4.1 Justification for change

Prior to the formal approval of a change cf. section 3.1.2 the change proposal shall be substantiated and documented in the change log cf. section 3.4.

The change proposal shall include the following information:

- the component(s) and related documentation to be changed including the unique identification number, version number and status,
- a description of the proposed change,
- a listing of other components and related documentation that may be affected by the change,
- the personnel or supplier composing the change proposal as well as the date of the proposal,
- the reason for the change, and
- the category of the change.

The status of the change processing, the related decisions and dispositions shall be documented on an on-going basis.

4.2 Evaluation of change

The change proposal shall be evaluated, and this shall be documented in the change log cf. section 3.4. The evaluation shall be conducted in accordance with the purpose of the Gambling Act and associated executive orders. The risk assessment shall be based "ISO/IEC 31010 Risk management - Risk assessment techniques".

The change evaluation shall include:

- the expected effect of the change,
- a description of the risk associated with the change,
- a description of the change's effect on the licence holder's regulatory compliance, and
- the impact of the change on the gambling system's confidentiality, integrity, availability and accountability cf. section 3.3.3.

4.3 Approval of change

A process shall be established that ensures all change proposals and associated change evaluations are presented for formal approval cf. section 3.1.2 and the final approval or dismissal of the change can take place.

All decisions on changes including relevant considerations shall be recorded in the change log cf. section 3.4.

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4.3.1 Approval of changes recommended by a supplier

When a change in the gambling system of the licence holder is initiated on the basis of a recommendation from a supplier, the licence holder's approval of the change can be based on the supplier's change justification cf. section 4.2 and change evaluation cf. section 4.2. The licence holder shall still make a separate change evaluation describing how the change will impact the entire gambling system.

The time between the supplier recommendation and the implementation shall be justified in the change log cf. section 3.4. Documentation for the implementation of the supplier's recommendation shall also be recorded in the change log.

4.3.2 Dismissal of changes recommended by a supplier

If a licence holder dismisses the implementation of a change recommended by a supplier it shall be justified in the change log cf. section 3.4.

The accredited testing organisation shall analyse and attest on each individual justification and dismissal of the supplier's recommendations.

The justification for not following the recommendation of the supplier as well as the result of the analysis of the accredited testing organisation shall be included in the tri-monthly report cf. section 2.1.3.

4.4 Implementation and verification of change

This section applies to changes to components classified with relevance code 2 or 3 cf. section 3.3.3. Components classified with relevance code 1 have no relevance in relation to the criteria in section 3.3.3 and changes to these do not need approval from the accredited testing organisation.

After the implementation of a change the compliance with the approved change shall be verified. The verification shall be recorded in the change log cf. section 3.4.

4.4.1 Changes to components classified with relevance code 3

The accredited testing organisation shall assess and approve the change evaluation cf. section 4.2 of the licence holder of all changes to the components of the gambling system classified with relevance code 3 ("significant relevance") cf. section 3.3.3.

The accredited testing organisation shall certify all changes during or in direct continuation of the implementation. These certifications shall be included in the report submitted every three months cf. section 2.1.3.

The accredited testing organisation can allow changes to occur without certification where the licence holder has an internal function dedicated to undertaking quality assurance of change management. This function shall be manned with appropriately skilled staff as well as being organisationally separated from the function implementing system changes.

If the certification is postponed the accredited testing organisation shall assess, approve and certify these changes every three months. The certification shall clearly state whether this method has been used.

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The option to postpone certification to the interval of three months is only available to licence holders. The option to postpone certification is not available to suppliers without an individual licence to offer gambling in Denmark.

4.4.2 Changes to components classified with relevance code 2

The accredited testing organisation shall assess and approve the change evaluation cf. section 4.2 of the licence holder of all changes to the components of the gambling system classified with relevance code 2 ("some relevance") cf. section 3.3.3 and subject to Spillemyndigheden's testing standards SCP.01.xx.EN.

The accredited testing organisation shall certify these changes every three months.

The accredited testing organisation shall assess and approve the change evaluation cf. section 4.2 of the licence holder of all changes to the components of the gambling system classified with relevance code 2 ("some relevance") cf. section 3.3.3 and subject to Spillemyndigheden's inspection standards SCP.02.xx.EN.

The accredited testing organisation shall certify these changes every twelve months.

Guidance to the accredited testing organisation: The analysis of the risk involved in changes should be carried through based on an appropriate sampling method and it shall take account of the assessed relevance of and risk involved in the change. Thereby a complete audit of all changes will not be necessary.

5 Reports from the component register and the change log

Upon request from Spillemyndigheden or the accredited testing organisation the licence holder shall be able to generate the following reports based on the information in the component register cf. section 3.3.2 and the change log cf. section 3.4:

- a report of all components including the registered information from the component register,
- a report of the change history of an individual component,
- a report of the geographical location of all hardware components, and
- a report of all verified changes cf. section 4.4.

6 Prior approval of change from Spillemyndigheden

6.1 Random Number Generator

The implementation of a new Random Number Generator (RNG) and changes to an existing RNG shall be notified with Spillemyndigheden five working days before the implementation or change is carried out.

6.2 New games and changes in the existing offer of games

The technical requirements for the SAFE and the use of Standard Records are described in annex 1 to the executive orders cf. section 1.

6.2.1 Implementation of new games

The implementation of new games, which does not affect how the licence holder utilises Spillemyndigheden's Standard Records, can commence without prior notification with Spillemyndigheden.

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The offering of new games, which utilises Spillemyndigheden's Standard Records not previously utilised by the licence holder, shall be notified with Spillemyndigheden five working days before the offering commences and examples of Standard Records must be submitted along with the notification.

6.2.2 Changes in the existing offer of games

Changes to the existing offering of games, which does not affect how the licence holder utilises Spillemyndigheden's standard records, can commence without prior notification with Spillemyndigheden.

Changes to the existing offering of games, which would affect the utilisation of Spillemyndigheden's existing standard records by the licence holder, shall be notified with Spillemyndigheden five working days before the offering is changed and examples of Standard Records must be submitted along with the notification.

6.2.3 Situations where Spillemyndigheden's Standard Records cannot be utilised

The offering of new games, which cannot utilise Spillemyndigheden's Standard Records, shall be notified with Spillemyndigheden at least 60 working days before the offering commences and shall not commence without prior approval from Spillemyndigheden.

Changes to the existing offering of games, which would affect the utilisation of Spillemyndigheden's Standard Records to an extent where they can no longer be used by the licence holder, shall be notified with Spillemyndigheden at least 60 days before the offering is changed and shall not commence without prior approval from Spillemyndigheden.