

Contract

for the Delivery of SW for the Purposes of the CNB's Internal Audit
made pursuant to section 1746 (2) and section 2358 et seq. of Act 89/2012 Coll., Civil Code
between:

Czech National Bank

Na Příkopě 28
115 03 Prague 1
Czech Republic

Represented by: Ing. Vladimír Mojžíšek, Head of Information Systems Division
and
Ing. Zdeněk Virius, Head of Administrative Division

Company ID: 48136450

Tax ID: CZ48136450

(hereinafter the "Customer")

and

Logen Ltd.

9, Bistritsa Street
1000 Sofia
Bulgaria

Represented by: Vasil Kolev, Manager

Company ID: 130888472

Tax ID: BG130888472

(hereinafter the "Provider")

Article I

Subject Matter of the Agreement

1. The subject matter of this Contract is the Provider's obligation to deliver, install and commission in the Customer's environment software for the purposes of the Customer's internal audit (hereinafter the "SW"), including basic user configuration of the SW, i.e. configuration of functional capabilities including any potential process workflows and adjustment to the Customer's audit terminology. The delivered SW must comply with all the mandatory functional requirements of the Customer under Annex No. 1 and must be fully compatible with the Customer's standard system environment specified in Annex No. 2, including the compliance with all the system requirements specified in Annex No. 2, and meet the specifications under Annex No. 3.

This delivery also includes:

- a) Handover of the administrator and user documentation in Czech or English, in one copy each in electronic form. Administrator documentation will contain especially configuration procedures and activities of the administrator (installation and configuration). It will also contain the procedures for the administrator of the SW application, especially the creation of customized reports, parametrization of the application and the management of access privileges and roles. User documentation

- will contain especially a description of the method of use of the SW application by the end user.
- b) Training of 4 administrators for the administration and configuration of the SW with the duration of two (2) business days and 10 end users for the use of the SW with the duration of two (2) business days at the Customer's registered office seat, unless the parties agree otherwise.
 - c) Providing support during acceptance testing, during which the Customer will check the meeting of the Customer's mandatory functional requirements according to Annex No. 1 and compatibility according to Annex No. 2 and during which it will be verified whether the SW functions are in accordance with the user/administrator documentation.
 - d) Providing the relevant SW licenses enabling to use the SW.
- 2. The Provider undertakes to provide the Customer with support which will include the provision of a Hot-line/Helpdesk service, removal of defects and provision of new versions of the SW. "New version of the SW" means any update triggered by a change in the SW environment (application server, database etc.), correction of errors, security patches and any development of the delivered SW.
 - 3. If required by the Customer, the Provider further undertakes to provide the Customer additional licenses for new users of the SW (auditees) for the prices specified in Art. IV, Par. 4. These additional licenses will be provided by the Provider on the basis of the Customer's written request made via the Customer's authorized person. The Provider's obligation to provide additional licenses for agreed prices will last for a period of three (3) years after the signing of this Contract.
 - 4. In case of any renaming, renumbering, change in licensing etc. during the term of this Contract, the Provider will be obligated to ensure the "direct successor" of the license concerned, while observing the relevant price of the license specified in Art. IV, Par. 4.
 - 5. The Provider acknowledges that it will not be granted remote access to the Customer's servers that are used for testing and operating the SW.
 - 6. For the delivery made under this Contract, the Customer undertakes to pay the prices under Art. IV.

Article II

Deadlines, Place and Handover of Delivery

- 1. The Provider will hand over the delivery under Art. I, Par. 1 to the Customer within ten (10) weeks after signing this Contract. Customer undertakes to provide the Provider all possible cooperation, which is necessary to hand over the delivery in established deadline.
- 2.
 - a) The Customer will take over the delivery under Art. I, Par. 1 after successful acceptance testing. The definition of "successful acceptance testing" is provided in letter (c) of this paragraph.
 - b) Acceptance testing will last for a maximum period of ten (10) consecutive business days, unless the parties agree on a longer period. Handover of the SW for acceptance testing will be documented by a certificate. Before start of the testing, the Provider is obligated to hand over to the Customer the user and administrator documentation under Art. I, Par. 1, letter (a). The Provider may take part in the testing. During the

testing, the Provider will be available at Hotline/Helpdesk and will be removing any potential defects. During acceptance testing, defects in the SW will be divided into categories A and B.

Category A defects:

- complete loss of functionality of the SW solution;
- the SW contains one or several of the following characteristics:
a data loss or damage; partial/complete failure to comply with any of the Customer's mandatory requirements under Annex No. 1; a threat to the operation or availability of other applications in the Customer's operating environment.

Category B defects:

The SW solution or any of its components has a limited functionality which, however, has no negative impact on the functionality of any of the mandatory requirements under Annex No. 1.

- c) The categorization of defects will be determined by the Customer. If no category A defect and no more than 1 category B defect occurs during the testing, the SW complies with the compatibility requirement under Annex No. 2 and meets the specifications under Annex No. 3, the testing will be considered successful. In case of detection of any defect, the Provider's authorized person will be informed for the purposes of removing defects in the SW.
 - d) The result of the testing will be documented by an acceptance certificate signed by the parties' authorized persons.
 - e) In case of successful acceptance testing, a handover certificate documenting handover and receipt of the SW will be drawn up and signed by the parties' authorized persons. The acceptance certificate will be appended to this handover certificate. If the SW is handed over and received in accordance with letter (c) of this paragraph with a defect, the Provider will be obligated to remove the defect identified in the acceptance certificate no later than twenty (20) business days after signing the handover certificate.
 - f) If the testing is not successful, acceptance testing may be repeated. The testing will start on an alternative date chosen by the Customer within ten (10) business days after the Provider's notification of removal of the defects.
 - g) In the event that testing is not successful, the Customer will have the right to withdraw from this Contract. A withdrawal from this Contract will take effect on the day when a written notice of withdrawal is delivered to the Provider.
3. The training specified in Art. I, Par. 1 (b) will be organized by the Provider no later than three (3) business days before the start of acceptance testing. Completion of the training will be documented by a certificate signed by the parties' authorized persons.
 4. Additional licenses under Art. I, Par. 3 will be subscribed for by the Customer according to its current needs. The Provider undertakes to allow the Customer to download these licenses within four (4) weeks after delivery of the request under Art. I, Par. 3.
 5. The place of delivery is the Customer's registered office (seat).

Article III

Authorized Persons of the Parties

The following are the parties' authorized persons, especially for technical negotiations, communication, handover and receipt of the delivery, support including the reporting of any defects in the SW, the signing of certificates:

for the Customer:

Ing. Jiří Souček, tel. +420 224 413 402, e-mail: jiri.soucek@cnb.cz

Ing. Alena Schneiderová, e-mail: SIA.Admins@cnb.cz

Ing. Václav Paulík, e-mail: SIA.Admins@cnb.cz

Pavel Rajm, e-mail: SIA.Admins@cnb.cz.

for the Provider:

Konstantin Lalov, tel +359 (2) 935777, e-mail: services@logen.bg.

The parties undertake to report any change of their authorized persons or the contact details of these persons within three (3) business days after making the change to the e-mail addresses of the other party's authorized persons.

Article IV

Prices of Delivery and Payment Terms

1. The price of the delivery under Art. I, Par. 1, except for training, is EUR 22,142,- excluding VAT. The price also includes the price of licenses. The specifications of licenses are provided in Annex No. 4.
2. The price of the training under Art. I, Par. 1, letter (b) is EUR 7,370,- excluding VAT.
3. The price for the provision of support under Art. I, Par. 2 is EUR excluding VAT per year:
 - a) for the 1st year – 2,954,- EUR excluding VAT
 - b) for the 2nd year – 3,101.70 EUR excluding VAT
 - c) for the 3rd year – 3,256.79 EUR excluding VAT
 - d) for the 4th year – 3,419.63 EUR excluding VAT.

The price for the provision of support for the 5th (and any other years) will be agreed between counterparties and stated in amendment signed by the authorized representatives of both parties.

4. The prices for the provision of an additional license under Art. I, Par. 3 (license for auditee) for 1 user is EUR 110,- excluding VAT and annual support/client side. The price is valid for three (3) years after the signing of this Contract.
5. The agreed prices include all the expenses incurred by the Provider in relation to the performance of this Contract.
6. The payment of the price specified in Par. 1 and 2 of this Article will be made on the basis of a tax document issued by the Provider no earlier than on the day of signing the SW handover certificate.

7. The payment of the price under Par. 3 of this Article will be made in advance on annual basis on the basis of a document which may be issued by the Provider no earlier than thirty (30) days before the start of the relevant annual period.
8. The price of any additional licenses under Art. I, Par. 3, will be paid by the Customer on the basis of a tax document which may be issued by the Provider no earlier than on the day of delivery of the licenses or, if the licenses are available for downloading, on the day when the Provider is delivered the Customer's electronic notification of downloading the licenses. In case of downloading the licenses, the Customer is obligated to notify this to the Provider's authorized persons on the day of downloading the licenses.
9. At the end of every calendar year, but no later than 31 December, the Provider is obligated to notify the Customer in writing, for the purposes of fulfilling its tax obligation, how big a portion of the paid annual price of support is represented by the price of new versions constituting a technical improvement (upgrade) of the SW.
10. Besides the information required by law, the payment document must also include the Customer's contract reference number. In the event that a document does not contain any of the required information or contains information that is incorrect, the Customer may return such a defective document to the Provider. The new payment deadline will start to apply on the delivery date of a faultless document.
11. The payment document will be sent electronically by Provider to address faktury@cnb.cz, while the invoice must be attached in e-mail message as PDF document. Each e-mail message sent to the Customer must contain only one invoice in a form of attachment. Beyond invoice attachment, e-mail may include one to three attachments (which relates to invoice) in PDF, DOC, DOCX, XLS, XLSX formats. If there is no possibility to sent the payment document electronically, it will be sent by the Provider to the following address:

Czech National Bank
Budget and Accounting Department
Central Accounting Division
Na Příkopě 28
115 03 Prague 1.
12. The payment document is due and payable within fourteen (14) days after delivery to the Customer. The obligation to pay will be deemed fulfilled upon debiting of the relevant amount from the Customer's account in favor of the Provider's account.

Article V

Providing Support

1. The Provider guarantees that the SW will be functional and fit for use in the Customer's environment and will comply with the properties and parameters declared in the documentation and with the Customer's requirements.
2. The Provider undertakes to provide the Customer with support starting from the business day following the day when the handover certificate under Art. II, Par. 2, letter (e) was signed. This support includes the provision of:
 - a) new SW versions by enabling download of such SW no later than thirty (30) days of releasing a new SW version.
 - b) a Hotline/Helpdesk service for reporting and removing defects in the SW based on the 5*8 schedule on business days from 08:30 a.m. to 4:30 p.m. CET at the telephone [REDACTED]

number +359(2)9357777 or at the e-mail address support@logen.bg. Especially the following will also be provided through a Hotline/Helpdesk service:

- consultation support to end users,
- consultation support to application administrators to ensure the fully functional configuration of all SW elements (namely the database server, the application server and the client part of the solution) and to ensure proper functioning of the SW and the use of SW functionalities;

and, in addition, this service will be used to keep records of and remove the reported defects in the delivered SW.

Defects will be reported by the Customer by telephone with subsequent written confirmation on the same day by e-mail to the e-mail address specified in this letter

(b). "Defect" means a situation when the SW does not work in line with the documentation or the Customer's requirements.

3. The Provider is obligated to remove every defect within five (5) business days after the defect was reported, unless agreed otherwise. Every request for consultation support under Par. 2, letter (b) of this Article must be processed/successfully resolved within two (2) business days after the request is reported via the Hotline/Helpdesk service, unless agreed otherwise.
4. The Provider is obligated to report any change to the contact details provided in Par. 2, letter (b) to the e-mail addresses of the Customer's authorized persons no later than one (1) business day before making the change.
5. The parties acknowledge that during the provision of support under this Contract all the communication between the Customer's and Provider's staff will take place in Czech or English, unless the Provider requires that such communication will take place in English.

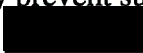
Article VI

Default Interest

1. In case of the Customer's delay with the payment of a tax document, the Provider will have the right to charge a default interest at the rate defined by Government Order No. 351/2013 Coll.
2. Default interest is due and payable within fourteen (14) days after delivery of the relevant payment document to the obligated party. The obligation to pay will be deemed fulfilled once the relevant amount is debited from the account of the obligated party in favor of the account of the entitled party.

Article VII

Licensing Arrangements

1. The Provider grants to the Customer a non-exclusive and non-transferable license, unlimited in time and territory, to use the SW for the Customer's own needs.
 2. The right to use the delivered SW will pass on to the Customer on the day of signing the handover and acceptance certificate under Art. II, Par. 2, letter (e).
 3. The Provider declares that it is authorized to grant the license under Par. 1 to the Customer and that the supply made hereunder is not subject to any third party rights that may prevent such granting.
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Article VIII Confidentiality

1. The Provider undertakes to ensure that its employees, as well as other persons who take part in the performance of this Contract, will keep confidential any and all information that they learn while performing this Contract and that is not in the public domain. This will not affect the mentioning of the SW delivered under this Contract by the Provider as a reference project after receipt of the SW by the Customer, except if the Customer withdraws from this Contract due to defects in the SW.
2. The confidentiality obligation will last even after this Contract ceases to be effective.

Article IX Publication of the Contract

1. The Provider is aware of the Customer's statutory obligation to publish this Contract, including any changes and amendments thereto, in the Customer's profile.
2. The Customer's profile is an electronic tool through which the Customer, as a contracting authority under the Public Procurement Act, No. 137/2006 Coll., as amended (hereinafter the "PPA") publishes information and documents concerning its public contracts in a manner that allows for unlimited and direct remote access. At the time of signing this Contract, the Customer's profile is <https://ezak.cnb.cz/>.
3. The obligation to publish under this Article is imposed on the Customer by section 147a of the PPA.
4. Publishing will take place in accordance with the PPA and the relevant implementing regulation of the PPA.

Article X Withdrawal

1. In the event that either of the parties commits a material breach of its contractual obligations, the other party will have the right to withdraw from this Contract.
2. Especially the following will be regarded as a material breach of contractual obligations:
by the Provider:
 - a breach of the confidentiality obligation under Art. VIII,
 - a delay in handing over the delivery within the time-limit under Art. II, Par. 1 for a period longer than thirty (30) days for reasons for which exclusively the Provider is to blame,by the Customer:
 - a delay in the payment of any legitimately issued tax document or payment document for a period longer than thirty (30) days.
3. Withdrawal from this Contract will take effect upon delivery of a written withdrawal notice to the other party.

Article XI Set-off of Receivables

In accordance with section 1991 of the Civil Code, the parties have agreed that the Customer may set off any of its monetary receivable from the Provider, whether due or not, against any monetary receivable of the Provider from the Customer, whether due or not.

Article XII Term and Termination

1. The part of this Contract that concerns the provision of support under Art. V is for an indefinite term with the right of termination by a written notice which must be delivered to the other party no later than sixty (60) days before expiry of the prepaid support. The obligations concerning the provision of support will cease to exist upon expiry of the last day of the prepaid period of support under this Contract.
2. The parties have agreed that the Customer may at any time during any insolvency proceedings initiated against the Provider's assets terminate this Contract subject to a notice period of fourteen (14) days which will start on the day following the delivery of a written notice to the Provider.
3. In the event that the Contract terminates before the end of the prepaid annual support, the Provider will be obligated to return to the Customer a pro rata portion of the prepaid support within five (5) business days after termination of the Contract.

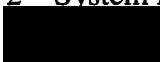
Article XII Final Provisions

1. This Contract will come into force and effect on the day when it is signed by the authorized representatives of both parties.
2. The parties have agreed that the contractual relationship established by this Contract will be governed by Act No. 89/2012 Coll., Civil Code, and Act No. 121/2000 Coll., Copyright Act, as amended.
3. The parties have further agreed that beyond the explicit provisions of this Contract no rights and obligations will be derived from common practices used in general or in the industry concerning the subject matter of this Contract.
4. This Contract may be changed and amended only by written and consecutively numbered amendments signed by the authorized representatives of both parties, unless this Contract stipulates otherwise.
5. The parties have agreed that any disputes arising out of or in connection with this Contract will be resolved exclusively in accordance with Czech law by general courts in the Czech Republic.
6. This Contract is made in three counterparts in English, of which the Customer will receive two counterparts and the Provider will receive one counterpart.

Annexes:

No. 1 – Customer's Functional Requirements for SW

No. 2 – System Environment and Related Requirements of the Customer



No. 3 – SW Specifications

No. 4 – License Specifications

Prague 18. 9. 2014

For the Customer:

[Redacted Signature]

Ing. Vladimír Mojžíšek
Head of Information Systems Division

[Redacted Signature]

Ing. Zdeněk Vírns
Head of Administrative Division

[Redacted Signature]

NÁRODNÍ BANKA

Na Příkopě 28, 115 03 Praha 1

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Sofia 17/09/2014

For the Provider:

[Redacted Signature]

Vasil Kolev
Manager



Customer's Functional Requirements for SW **Annex No. 1**

Requirement ID	Name	Description of SW Requirement	Importance	Description of Fulfillment of SW Requirement (the candidate will specify how the SW ensures/provides the functionality concerned)	Document Reference
F1	Creation and administration of audit missions	The SW allows for creation and administration of audit missions.	Mandatory	Pentana Vision allows creating and administering universe of audit units on three levels (Universe, Entity, and Audit). These three levels are color differentiated for easy and flexible user experience. At Audit level users can add, delete, view and launch particular audit work (mission) as well as caring out the detailed work and analysis.	Page 8 "Pentana Functional Overview v3.2"
F2	Workpapers	The SW allows for the creation of workpapers, including the possibility to create templates of electronic workpapers for individual audit missions.	Mandatory	Pentana Vision allows creation of workpapers (steps, tests, objectives, risks, controls, findings, automated reports in MS Word/Excel, etc.) directly in the software interface and possibility to create templates (libraries) of electronic workpapers for individual audit missions. Pentana Vision features creation and maintenance of: ➤ Auditable Processes Library; ➤ Milestones Library; ➤ Steps (Audit program/Work Plan) Library; ➤ Risk, Controls and Tests Library; ➤ Findings and Recommendations Library; ➤ Questionnaires Library; ➤ Attachments Library; ➤ Audit Reports Library; ➤ Reports Library. Within each audit mission users can work with workpapers in three different ways, depending on their preferences:	Page 4, 6, 8, 11, 20 "Pentana Functional Overview v3.2"

F3	Editing workpapers	The SW allows for the editing of individual workpapers to keep a record of audit activity, including changes of basic font features in the text of workpapers such as font size, color, font type, bullets, insertion of tables or external hyperlinks.	Mandatory	➤ create workpapers from scratch; ➤ add workpapers from library; ➤ add workpapers from previous audits. Pentana Vision allows editing of individual workpapers through the software interface. Vision supports rich text fields which allows text formatting, including font size, color, font type, bullets, copy or create tables and external hyperlinks. Pentana Vision features build-in Audit trail that keeps full history of each change made in each element including changes made in workpapers, like changing rich text fields font size, color, font type, bullets, insertion of tables or external hyperlinks, etc.. Audit trail record information for the date of change, user that changed it and full details of all element properties.	Pages 9, 18 "Pentana Functional Overview v3.2"
F4	Status of documents	The SW allows for recording the status of individual documents - unfinished/ready for supervision/approved/returned for correction.	Mandatory	Pentana Vision allows recording of status for individual elements, informing user if they are unfinished, ready for supervision or approved. For better user experience each status is with different color. Pentana Vision also allows adding unlimited number of optional "reviews", which is an additional level of approval control. Also where a manager's review identifies the need for further work, he/she can use the build-in option "Undo Completed" to return the elements for correction. He/she can raise an unlimited number of Review Points (also known as 'coaching notes') and assign them to the	Pages 9, 11 "Pentana Functional Overview v3.2"

				originator of the work or to someone else to provide additional information and clarification. All steps are recorded in the Audit Trail, including changes in the status of the elements, date of change, user that changed it and all element properties. Also for user's convenience, the change of the status of the element, as well as the assigned review point is reflected in the personal dashboard on the Home Screen of the auditor.	
F5	Supervision by a manager	Electronic documentation allows for supervision by a manager (superior) and for approval/return of a document for correction to the employee according to predefined rights (see requirement F29), monitoring of changes and insertion of review points.	Mandatory	Pentana Vision allows flexible supervision procedure for approval or return of a document for correction to the employees, according to the predefined right. Where a manager's review identifies the need for further work, he/she can raise an unlimited number of Review Points (also known as 'coaching notes') and assign them to the originator of the work or to someone else. Only users with necessary rights can approve electronic documentation. Pentana Vision supports audit trails, so every change made is automatically recorded and can be reviewed at any time.	Pages 11, 18, 19 "Pentana Functional Overview v3.2"
F6	Handling of support documentation	The SW allows for saving the support documentation and its referencing directly into the text of workpapers.	Mandatory	Pentana Vision users can add any supporting comments, result notes and references (as well as pictures) directly into the rich text fields of workpapers. Additionally users can attach directly to particular workpaper any type of file (e.g. word, excel, pdf,	Page 9, 10 "Pentana Functional Overview v3.2"

			picture, video, etc.) as supporting documentation. These files are automatically linked to the particular worksheet and automatically given a reference number. These attached documents can be directly reviewed or edited without the need of saving them locally. Attachments can be added through drag and drop functionality. Pentana Vision has enhanced hyperlinks functionality that allows a user to 'jump back' or see a list of links to the current object. This solves the business requirement of cross references which is required to link an Attachment to multiple Tests, for example. Additionally this hyper linking functionality can be used to insert link to a document directly into the text of a worksheet.	Pages 4, 5, 6 "Pentana Functional Overview v3.2"
F7	Risk database	This is a required basic functionality of the audit system (software) in the form of an interactive database of risks and related control mechanisms. The database of risks and related control mechanisms will be then used for the purposes of audit planning. This part of the audit SW may also be accessed by the staff outside the audit team (management/risk managers).	Mandatory The risk assessment can be used for the purposes of audit planning and may be accessed by the staff outside the audit team (management/risk managers).	

F8	Working with risk database	Insertion and administration of risks. A risk log must contain the following fields: unique reference of the risk, risk name, risk description, name of owner of the risk, section/department to which the risk relates, assessment of inherent risk, assessment of residual risk.	Mandatory	Pentana Vision allows the insertion and administration of Risks at Library, Entity and Audit level. Users can add the following information for each risk: ➤ unique reference of the risk; ➤ risk title (name); ➤ risk description; ➤ risk category; ➤ risk type or section/department; ➤ business owner (owner of the risk); ➤ owner (auditor responsible); ➤ comments; ➤ state; ➤ assessment of inherent risk (including inherent likelihood and impact); ➤ assessment of residual risk (including residual likelihood and impact). Additional fields can be added upon additional customizations.	Page 6, 7 "Pentana Functional Overview v3.2"
F9	Risk-related control mechanisms	The SW allows for insertion of risk-related control mechanisms.	Mandatory	Pentana Vision allows insertion of risk related control mechanisms. Control(s) are created/added directly against risk or objective and automatic reference is created. Controls can be assessed by operation and design (the form of this assessment is customizable).	Page 6, 7, 13 "Pentana Functional Overview v3.2"
F10	Risk assessment	The SW allows for assessing the impact of the risk and their probability (the form of this assessment must be customizable).	Mandatory	Within each audit engagement Pentana Vision allows to give an assessment of inherent risk (the risk before the implementation of control activities for its minimization) and residual risk (risk after being given control activity). These two risks are evaluated on two factors for the formation of this summary (probability and impact). The form of this assessment is	Page 12, 13 "Pentana Functional Overview v3.2"

				customizable (rating, colors, assessments scale, etc.), so it can fit organization methodology.	
F11	Integrated risk database	The SW contains a linkage of the risk database to mission planning processes and electronic working documentation.	Mandatory	The Risk register (Risk database) is connected to the mission planning processes and all related electronic working documentation in Pentana Vision. Pentana Vision helps users to risk-assess their audit universe in respect of their chosen planning periods, in order to determine and maintain their Audit Schedule or Plan. After the risk score is done, Pentana Vision makes suggestions for audit mission plan/schedule, based on couple of criteria like: Risk Score, Fixed Frequency and Last Audit Rating. Then users can use the option "Add Candidate Audits in Bulk" to create automatically those audits.	Page 4, 5, 6 "Pentana Functional Overview v3.2"
F12	Risk classification by parameters	The SW contains an option to classify (sort) risks by key parameters: amount of the risk, owner of the risk, section/department to which the risk relates.	Mandatory	Pentana Vision have very flexible interface that allows sorting, filtering and grouping by any element, including risk. This way risks can be classified (sorted) by any of its components, including amount of risk, owner, section/department, etc. Additionally risk can be presented graphically in heat map (Risk Matrix) or Dashboard. These graphical representations are interactive, so they allow drill-down, sorting or filtering with a click of a button.	Page 16, 17 "Pentana Functional Overview v3.2"
F13	Access privileges for risk database	The SW allows the audited entities to be granted limited access to the risk database for the purposes of assessing individual risks.	Mandatory	Pentana Vision has easy to manage permissions with role based privileges which are both robust and flexible. It is possible to grant limited access to the audited entities for assessing their individual risks into the Risk register (Risk database).	Page 20 "Pentana Functional Overview v3.2"

F14	Monitoring and administration of corrective measures	The SW contains a functionality for administration and monitoring of recommendations and corrective measures.	Mandatory	Pentana Vision have integrated Action Tracker menu, where user can easily track the status of their actions (recommendations and corrective measures). The Action Tracker is presenting opened Actions in drillable matrix of Processes and Auditable Entities, so users can easily identify the number of actions and their origin. When a cell is clicked, the corresponding actions and their current status is displayed in nice looking list. From this list the users can easily make any changes on the actions or add action updates. Additionally all Actions and Findings can be easily analyzed and monitored in the integrated Dashboard. Pentana Vision also features automatic email generation for issue/recommendation notification with standard body and subject titles. The default email notifications that can be used are: ➤ Send Initial Emails; ➤ Send Reminder Emails; ➤ Send Rejection Emails.	Page 10, 11, 16, 17, 18 "Pentana Functional Overview v3.2"
F15	Inserting recommendations	The SW allows for inserting recommendations related to the findings of internal audit of individual missions	Mandatory	During creation of finding into Pentana Vision, users can enter information about: ➤ Finding reference number; ➤ Finding title; ➤ Finding description; ➤ Recommendation; ➤ Category; ➤ Severity; ➤ Outcome; ➤ Etc.	Page 10 "Pentana Functional Overview v3.2"

F16	Linking recommendations with findings	The SW allows for direct linkage of recommendations with the findings identified and recorded in electronic audit documentation	Mandatory	In Pentana Vision findings and recommendations are entered in the same interface, so users can easily work with them. No additional links are required. Additionally each recommendation and the corresponding corrective actions are automatically linked to the corresponding findings.	Page 10 "Pentana Functional Overview v3.2"
F17	Working with recommendations	The SW allows for addressing individual recommendations to the audited entities. The audited entities will have access to the relevant recommendation and will be able to describe the current state of completion.	Mandatory	There are two ways in Pentana Vision how audited entities can easily access all findings and actions for their areas of responsibility and describe the current state of completion: ➤ It is possible to purchase limited access licenses (we call them business users licenses or auditees licenses). These licenses are cheaper than the standard licenses and they will have direct access to the system, limited to see only elements that they are assigned to. According to the requirements in this RFP, 100 licenses for business users will be provided; ➤ The standard Pentana Vision functionality can be used: "two way MS Word template with email notification". This functionality gives the ability to automatically create MS Word document with all the findings, recommendations, assigned actions, etc. and this document can be sent via email. If they have some comments/feedbacks to these elements, they can put their response in the word document and return it via email. The document then is imported into Pentana Vision and automatically populate the	Pages 14, 17, 20 "Pentana Functional Overview v3.2"

				answers in the system. This functionality does not require to purchase any licenses for the audited entities.	
F18	Notification e-mails	The SW allows for sending e-mail reminders to the audited entities with a reference to the relevant recommendations and for the purposes of urging overdue recommendations.	Mandatory	Pentana Vision features automatic email generation for recommendation notification with standard body and subject titles. The default email notifications that can be used are: ➤ Send Initial Emails; ➤ Send Reminder Emails; ➤ Send Rejection Emails. Any other email notification can be configured additionally and charged separately.	Page 17 "Pentana Functional Overview v3.2"
F19	Summaries of recommendations - sorting and filtering	The SW allows for displaying summaries of their recommendations, filtering and sorting at least by these parameters: owner of the recommendation, age of the recommendation, section to which the recommendation belongs, auditor responsible for the recommendation.	Mandatory	Pentana Vision provides the ability to display summaries of recommendations. They can be filtered, grouped, sorted based on any information entered for the finding/recommendation/action, including on owner of the recommendation, age of the recommendation, category to which the recommendation belongs, auditor responsible for the recommendation, etc. These tasks can be achieved either in Action Tracker, in Analysis menu or Findings menu of particular audit mission.	Pages 16, 17 "Pentana Functional Overview v3.2"
F20	Functionality for audit planning	The SW contains a tool/functionality for allowing electronic compilation of an annual audit plan according to the defined Audit Universe, including assignment of individual members to audit teams. The tool allows for setting the capacities for individual members of audit	Mandatory	Pentana Vision allows electronic compilation of an annual audit plan in the Audit Coverage menu, according to the defined Audit Universe. This is made with easy to use interface presenting matrix of Auditable Entities and Auditable Processes. The system makes suggestions for candidate audits based on the specific criteria (like: Fixed Audit Frequency, Risk Score, Last Audit Score) and it can also automatically create these candidate audits. Audit members can be assigned	Pages 3, 4, 5, 6, 8 "Pentana Functional Overview v3.2" Page 2, 3 "Retain Brochure"

		teams and display potential conflicts, if an auditor is assigned to several missions simultaneously.		to individual audit missions. Also Pentana Vision has integrated module (Retain Wallchart) for resource planning allowing allocation of Auditors against audits, showing planned time in a graphical way (Gant Chart). Audits and auditors are taken automatically from the Audit Coverage and Staff defined in Pentana Vision. Additional tasks, outside the Audit Universe can be additionally added, like Training engagements, holidays, administrative tasks, etc. Retain Wallchart has integrated controls that inform or prevents for potential conflicts, e.g. auditors to be assigned to several missions simultaneously, auditors to be assigned in non-working days, etc.	
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F21	Creating audit reports	The SW allows for creating optional reports from optional data sources of electronic audit documentation. Reports may be exported directly to MS Excel and MS Word formats without the need for complicated conversions.	Mandatory	Pentana Vision has been specifically designed to deliver a very flexible approach to all reporting needs. In the main data (Analysis) screens, indeed in all screens throughout the application the layout and scope of the data grids can be customized by showing/hiding columns, adding groupings, applying filters and so on. Users can then output the grid as a report to screen and printer, or export the data into Excel with a click of a button. These report "views" can then be saved by the individual for continued personal use, as well as uploaded as views within the application for other users to utilize, thus allowing for the sharing of expertise and the development of a specific reporting process across the whole organization. Also Pentana Vision supports automated MS Word and MS Excel templates that can be built to export information in a concrete format. The price for the development of each automated audit report template or any other automated template is determined based on the complexity of the report. There are also numbers of free of charge reports that comes with the system.	Pages 13, 16 "Pentana Functional Overview v3.2"
F22	Time recording of auditors' work	The SW contains a log of the auditor capacities used for individual audit missions/administrative activities which allows for keeping detailed records of hours worked by auditors, including the possibility of	Mandatory	The integrated module of Pentana Vision (Retain Time) allows resources to record their Actual spent time via a weekly/monthly/etc. timesheet that reconciles against all hours work. The hours can be either automatically recorded with timer, or each individual employee can add the time they spent against audit mission or	Page 3 "Retain Brochure"

		approving completed summaries of hours worked by individual employees.		administrative activities. Time spent can be recorded either against the planned jobs or user can add additional tasks they have been working on. Retain Time features the possibility of approving completed summaries with an integrated approval mechanism.	
F23	The possibility to define audit teams under an audit mission	For each audit mission, the SW allows for assigning individual members of the audit team, including their titles (team member/head of audit mission/supervisor) and planned man-days. These functions will then define the individual duties and possibilities of auditors across electronic documentation. For configuration of functions see requirement F29	Mandatory	Pentana Vision supports assigning individual members of the audit team from Assign staff menu into individual audit mission. Each audit member is included with their names, titles, emails, phone number, etc. Each audit member can be assigned with specific role, defining their individual access rights and duties across all elements in the audit mission. Pentana Vision provides ability to be entered the number of planned effort days (man-days) and actual effort for each audit mission. Also Pentana Vision has integrated module (Retain Wallchart) for detailed resource planning allowing allocation of Auditors against audits, showing planned time in a graphical way (Gant Chart). Audits and auditors are taken automatically from the Audit Coverage and Staff defined in Pentana Vision. Additional tasks, outside the Audit Universe can be additionally added, like Training engagements, holidays, administrative tasks, etc.	Page 2 "Retain Brochure" Pages 8 "Pentana Functional Overview v3.2"
F24	Monitoring of audit mission progress	The SW allows for ongoing monitoring of the progress of each phase of the audit mission. It allows for generating a summary of audit	Mandatory	Pentana Vision has been specifically designed to deliver a very flexible approach to all reporting needs. In the Audit and Analysis screens users can monitor the progress of each phase of the audit mission. This allows users to generate	Pages 16 "Pentana Functional Overview v3.2"

		missions and filtering by mission name and stage of completeness.		summaries of audit missions, as well as filtering, sorting and grouping them by any information included in their Audit summary. This may include their name, stage of completeness, phase of the audit mission, audit manager, budget time, etc.	
F25	Staff performance monitoring	The SW allows for monitoring the actual hours worked by auditors compared to the plan and budget of each mission, including a summary report that allows for evaluation of the overall audit performance for a predefined period, audit missions and staff members.	Mandatory	Pentana Vision integrated modules that record planned (Retain Wallchart) and actual time spent (Retain Time) give the ability to monitor the overall performance of the staff. They allow generation of summary reports that compares planned vs. actual time for a predefined period, audit mission and staff members.	Page 2 "Retain Brochure"
F26	Linkage of findings and recommendations with electronic audit documentation	The findings and recommendations are directly linked to the audit documentation of missions so that it is possible to identify the audit test and the source information that relates to the finding.	Mandatory	In Pentana Vision finding and their recommendations are created directly against the audit documentations (test, steps, risks, controls, etc.) and the system automatically linked them together. The user friendly interface allows to hover over the finding and to identify the audit test and the source information that relates to the finding. This also allows user to "jump" directly to the finding/recommendation parent element with a click of a button.	Pages 10 "Pentana Functional Overview v3.2"
F27	Off-line work	The SW enables users to work off-line with electronic documentation, i.e. when the computer is not connected to the corporate network, and to perform data synchronization after the subsequent	Mandatory	With Pentana Vision users can "check out" parts or all of an audit to their local PC, work offline and subsequently "check in" their changes to the server. The user may decide whether to check out the entire audit, just the parts of the audit where he/she has been assigned as the 'Owner' or to	Page 14, 15 "Pentana Functional Overview v3.2"

		connection.		select individual Work Plans and Objectives. When selecting by Work Plans and Objectives, the user may also select individual Steps and Tests to check out, or get read-only copies of other items. Checked-out items automatically become read-only to other users, thereby avoiding any risk of conflicts. Where multiple people are working on the same Audit then they can each check out the parts of the Audit that are assigned to them. Once a user has checked out an Audit, the next time that they log into Pentana Vision they are prompted to log into the Server or Local instance of the database. The user logs into the 'Local' database when working offline and makes changes as normal. When ready to post changes back to the main database, the user logs into the 'Server' database, navigates to the Audit and selects 'Check In/Sync' from the Offline Working ribbon. Users may choose to check in or synchronise the entire Audit or selectively check in by Work Plans and Objectives. Check-in will upload changes and remove the local copy, while 'Synchronise' will upload changes but keep the item(s) checked out and refresh other data. An 'Undo Check-out' option is available for when a user wishes to cancel their checked out changes, while an 'Admin Undo Check-out' allows an administrator user to cancel someone else's check-out in cases of emergency, such as when a user's PC is lost or stolen or damaged.	
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F28	On-line questionnaires	The SW allows for creating simple questionnaire forms which may be sent during audit mission to the audited entities to obtain information in a quick and efficient manner.	Welcome	Pentana Vision has general facility to construct and complete logic-based audit questionnaires named Questionnaire. Questionnaires might range from very simple surveys such as an Audit Satisfaction Survey to large and complex ones such as detailed IT Controls Questionnaires. These questionnaires may be accessed from the audited entities (business users) in case they have the necessary access rights.	
F29	Environment for management of audit projects	The SW contains a work environment for transparent management of individual audit projects, containing information on each audit, composition of the audit team, configuration of rights and accesses for individual auditor roles and milestones for individual steps of the audit mission.	Mandatory	“Audits” and “Audit Work” menus in Pentana Vision contain information about each audit in the system, including information about the audit team (assigned users), their rights and access, roles, milestones for individual steps of the audit mission, etc.. This ensures work environment for transparent management of individual audit projects.	
F30	Copying texts from external files into electronic audit documentation	When copying a text from the clipboard (via Ctrl+C and Ctrl+V), it is necessary to preserve the content and formatting of the text being copied, except for a user-confirmed formatting change into the “plain text” format.	Welcome	Pentana Vision supports copying a text from the clipboard (via Ctrl+C and Ctrl+V). The software keeps the formatting of text being copied into the rich text fields. In case the user wants different formatting, he/she can change it accordingly.	
F31	Inserting and referencing of documents	It is possible to reference the support documents stored in the SW database directly into the text of electronic audit documentation, or the	Welcome	Pentana Vision supporting documents (attachments) can be added to the relevant electronic audit documentation (step, test, finding, etc.) by drag and drop directly upon the relevant element. This way the software creates	Pages 10 “Pentana Functional Overview v3.2”

		recommendation module, without the need for laborious copying of the hyperlinks of stored files into the links (references) in the text; this should be possible directly by using the "drag and drop" function in the application.		automatic reference between the supporting document and the electronic audit documentation.	
F32	Possibility of SW configuration acc. to audit requirements	The SW is configurable and it is possible to add new parameters in the work environment according to internal audit needs (especially new report templates, new types of electronic documentation, configuration of the codelist of the risk database, changing the name of menu items).	Mandatory	Pentana Vision is flexible and configurable software with integrated configuration interface that allows configuration according to client's methodology. Pentana Vision have integrated administration interface that allows core data configuration to be performed by expert users without IT assistance. From the administration menu the expert users can change: ➤ Staff: Add staff members and specifying roles; ➤ Roles: Edit the permissions for a selected role; ➤ Segmentations: Manage system to pick lists (drop down menus); ➤ Result Set: Possible outcomes for Work Plans and Steps; ➤ Terminology: Create and edit aliases (names of menu items); ➤ Matrix Configurations: Create or change Risk and Control Matrix configurations; ➤ Library Configuration: Create, manage and edit all libraries. Also users can create and save for reuse their own report views as templates.	

F33	Approving of selected documents by audited entity	The draft of the document stored in the SW is approved by the audited entity within the application.	Welcome	Business user (audited entity) can approve Actions, Findings, Audit Reports, Questionnaires, Steps and Review Points in case they have access to the system and they are granted with the required approval access rights.	Page 20 "Pentana Functional Overview v3.2"
F34	Access privileges for audit missions	The SW allows for managing access privileges of individual users at the level of individual audits (audit missions).	Mandatory	Pentana Vision provides very powerful and flexible security model across the whole application. This allows permissions to be completely configured to the way CNB wants their auditors to work within the application. When delivered, Pentana Vision has pre-defined roles to save configuration time. The administration roles include: ➤ System Administrator - These users can configure terminology, application segmentations and configure roles and permissions. ➤ User Administrator - These users can create new user accounts and assign pre-defined roles to new users. ➤ Library Administrator - These users have the ability to configure the applications library's of templates ➤ Client Administrator - When the application is used in multi-client mode, these users can configure new clients and edit the details of existing clients For Auditors there are four pre-defined roles available: ➤ Senior Audit Manager - These users manage all aspects of an audit. ➤ Audit Manager - This role is for the cross-over of managerial and performance of an	Page 19 "Pentana Functional Overview v3.2"

				audit. ➤ Auditor – For performance of an audit. ➤ Junior Auditor – For limited performance of an audit. ➤ Audit Viewer – For view-only access to an audit. Security roles can be additionally tailored on very detailed level (e.g. defining what elements, like steps/risks/controls etc. they can change, delete, define, etc.). Users can also be limited to seeing audits controlled by their audit office or region. In addition each auditor can be assigned for audit with Role different from the original assigned to them in order to extend/limit their original permissions for the particular audit.	
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System Environment and Customer's Related Requirements

1 INTRODUCTION

This part describes the individual components of the Customer's standard system environment and also specifies the requirements for implementation of the SW into this environment.

1.1 OVERVIEW OF CUSTOMER'S STANDARD SYSTEM ENVIRONMENT

The SW must support the Customer's standard system environment on an Oracle database platform or, alternatively, on a Microsoft SQL database platform - see below "Alternative platform based on MS SQL".

Server part:

The server part of the SW (a database or an application server) will be operated by using the operating system MS Windows Server 2008 R2 (Standard or Enterprise Edition) or RedHat Enterprise Linux 5. These operating systems run on the standard HW platform of x86/x64 servers (which are usually of the HP or DELL brands, such as HP DL380G7 or DELL PowerEdge R710) or are operated in virtualized versions on the VMWare vSphere server 4.x or Oracle VM 3.x platforms.

- The monitoring of standard server platforms and collection of logs are provided by the MS SCOM 2007 SP1 system.
- Standard platforms are regularly scanned for vulnerabilities by the QUALYS system.

Database platform:

The Customer's standard database platform is built on an ORACLE database. At the same time, it is possible to use the Oracle extension Oracle Business Intelligence 10g Enterprise Edition to generate reports.

Database servers:

- Oracle RDBMS 11g Standard Edition (Enterprise Edition only if necessary)
- Oracle Net protocol

Application and WWW servers:

- Oracle Web Logic Server 11,

Client part:

The client part of the SW must be capable of being operated as a full/rich Windows application (MS Windows XP + SP3 + Office 2003 SP3) or as a web client with the use of MS IE8.

At present, the Customer is implementing a new version of the client station based on the MS Windows 7 Pro + MS Office 2010 Professional platform. Therefore:

- The client part of the SW must be capable of being installed and operated on a physical PC with MS Windows 7 + Office 2010 Professional (see Configuration of standard client station).
- With regard to the fact that, as part of upgrading the Customer's client station, the client station is being migrated by using a client virtualization based on a published desktop through Citrix XenApp 6.5 on MS Windows 2008 Server R2, the client part of the SW must also be capable of being installed and operated in this environment / platform.

Configuration of standard client station:

- MS Windows XP Professional Eng., cp 1250, Service Pack 3 (operating system) + latest update
 - *Currently being replaced with MS Windows 7 Professional or a virtual desktop (Citrix Xenpp 6.5 on MS Windows Server 2008 R2)*
- TCP/IP network services (DHCP client, SNMP client)
- MS Office 2003 Eng. Standard (it is also possible to deploy Professional) + Service Pack 3 – an office software suite containing word processor "MS Word", spreadsheet application "MS Excel", presentation program "MS PowerPoint", e-mail client and task manager "MS Outlook"
 - *Currently being replaced by MS Office 2010 Professional Plus*
- MS Access Runtime 2003 (including the full version of Access in case of Office Professional)
 - *Currently being replaced by MS Office 2010 Professional Plus*
- MS .NET Framework version 3.5 or higher
 - *Currently being replaced by .NET version 4.0 or higher*
- MS Internet Explorer 8 Eng. (current SP)
 - *Currently being replaced by MS IE9.*
- Adobe Acrobat Reader X Eng. – viewer of files in PDF format
- Symantec Endpoint Protection

Installation of an additional operating platform on the client station is not preferred. Installation of programs (software) on the client station is performed mainly through remote automatic installation. Preferably, installation should be compatible with the MS Installer service (a standard service of the operating system).

It is not permitted to store data of permanent value on the client station. This data must be stored on central disk capacities. It is not permitted to perform batch processing of IS data on the client station.

It is permitted to initiate and perform batch processing of the centrally stored data only on a database server or, alternatively, on an application server.

Users or applications may store on the client station temporary data and program components that are derived from the centrally stored data; they may also perform local processing of data. For potential creation of temporary files and storage of data during the activity of components, it is necessary to use predefined directories available via variable environment (USERPROFILE, TEMP, TMP, APPDATA).

Access rights on client stations correspond with the default setting by Microsoft after installation of MS Windows XP Professional. If necessary, exceptions for the purposes of applications may be permitted after accurately defining the necessary changes in directories and registries and after appropriate justification of the required changes. Exceptions are centrally managed and applied to client stations through GPO (policy in Active Directory). Similar requirements also apply to the registration of libraries and the creation or changes of the values of keys in registries.

When working on the client station, the user by default works under the rights allocated to the "Users" group.

When implementing an information system, it must be ensured that the program components of the IS being implemented are not in conflict with the components of other information systems being operated. Thus, the IS being implemented must be capable of being operated in the Customer's system environment and, at the same time, it must not interfere with the functioning of other information systems.

Network connectivity:

- Client stations typically connected with a speed of 100 Mbsec-1 100Base-T
- Servers typically connected with a speed of 1 Gb 1000Base-T
- Only L3 connectivity allowed between servers and client stations and L2 or L3 connectivity allowed between servers
- Addressing according to RFC 1918 (10.x.y.z)
- A crossbar network with redundant core

Data back-ups:

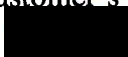
Backing up information systems and other data at the Customer is performed centrally. Only the data stored on central capacities administered by the Information Systems Division will be backed up. Back-ups are performed by using the HP Data Protector 6.0 back-up system or higher.

Single Sign-On functionality:

As a standard practice, the Customer's IS implements the Single Sign-On function by using the Microsoft Active Directory – MS AD service (Kerberos authentication protocol). This means that the user logs in to his/her client station only once and no name/password and no user authentication are required for retrieval of applications.

Management of roles and user access:

As a standard practice, access to all functions, programs (software) or system environment services and usually also DB roles, is managed through an internally developed application (an application above DB Oracle) which stores the list of users and their groups and this information is then propagated e.g. to Active Directory or made available via LDAP from Active Directory or application tables through views into other systems and applications according to their needs. For each asset (application, source, function, privilege, etc.) a so-called 'application group' is created into which users or accounts of their client stations are placed and, consequently, they are also provided access to the components or functions of the Customer's system environment.



Alternative platform based on MS SQL:

The requirements for the Customer's standard environment based on an Oracle database platform may be also analogically applied to the alternative database platform MS SQL with these changes:

- application and www servers based on MS IIS 7.5 or higher,
- server operating systems MS Windows 2008 R2,
- database environment MS SQL 2008 R2 Standard Edition.

1.2 LINKS TO EXTERNAL SOURCES AND SYSTEM ENVIRONMENT SERVICES

The internal audit system must also allow for linkage to the following system environment services being operated:

Name of system	Description of integration
MS Exchange 2010 (MS Outlook 2003/2010)	System for e-mail notifications (electronic mail interface). It is also possible to use communication with the standard MTA (sendmail) by using the SMTP protocol.
AD Windows domains	A Windows domain based on the MS Windows Server 2008 R2 platform, Kerberos authentication protocol – can be used for Single Sign-On

1.3 SECURITY

In connection with the security policy for information systems, the SIA system must be secured against threats that endanger its availability, confidentiality, integrity and auditability.

Security requirements are specified in the following table:

Requirement	Its implementation
Confidentiality	managed access (access rights acc. to roles)
Integrity	database transaction
Authentication	Preferably by name and password in Windows OS (SSO in co-operation with Active Directory)
Demonstrability	Audit log entry. Each entry in audit log must be sortable and exportable by the system administrator.

Servers and SW products installed thereon are regularly monitored and scanned by QUALYS (<http://www.qualys.com/>). In case of finding vulnerabilities of installed products with a value

of 4 or higher (values of output from Qualys system), they must be removed by application of patches or by a recommended workaround.

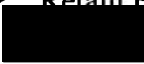
Important!

- 1) External entities are not granted remote access to servers and the applications installed thereon!**
 - 2) The system MUST NOT store on the database server any programs (agents) that work with the database server on local level.**
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SW Specifications

As SW Specifications (general description of the functionalities of the offered SW solution, list of the technical requirements, etc.) are provided the attached to this annex:

- Pentana Vision 3.2 Functional Overview;
- Pentana Vision 3.0 Technical Architecture & F.A.Q.; and
- Retain Brochure.



Licence Specifications

Name	Type	Procurement method / form of delivery	Number of licenses
Pentana Vision - full license	Software	end user licenses	10
Pentana Vision - business (auditee) users	Software	end user licenses	100
Retain Wallchart and Retain Time	Software	end user licenses	10