EXQUANCE
software for property professionals

XQ Property Valuation

User Guide

Version 1.0.6 for Windows

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Data organization

■ Database and users

Single-user database

After the first installation, the application runs in single-user database mode by default. A single-user database means that the database files, which contain all of the application working data (i.e. dictionaries, projects and analyses, users, report templates) are located on the user's workstation under the user's account and are not accessible to other users under the application.

You may switch the connection to single-user database mode at any time, if you're working in the multi-user database (see connection settings). Also, the application will start in the single-user database mode when the multi-user database is not available.

In the single-user database running mode, the user permissions and global roles do not apply, any user may create new projects, analyses, edit and delete data in the database and extract any reports from the application without limitations.

> *In the future versions of the application it will be possible to export the full analysis in the proprietary XQ format and import it to another database. However, the projects in the corporate database will be protected and will require a special permission by the supervisor to export the full analysis.*

"

How to tell in which database mode the application is running?

When the application is running you can check the right bottom corner of the application window to see the connection information, which contains your user name and the database connection mode. The green indicator shows if the connection is active (bright green) or inactive (dim green). The user is identified as the current Windows Session user, i.e. `UserName@ComputerName`, or, when the user is logged in to the domain, `UserName@Domain`.

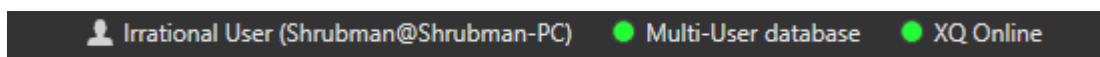👤 Ivan Nokhrin (Shrubman@Shrubman-PC) ● Single User database ● XQ Online
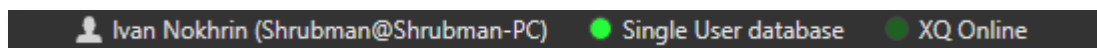
You may switch the connection to multi-user database mode at any time, if you're working in the single-user database mode *(see Connection settings)*. Also, the application will start in the single-user database mode when the multi-user database is not available.

Multi-user database

When the application is running in single-user database mode, the user may switch to a multi-user database in order to be able to collaborate with your team. In the multi-user environment any changes that you make to the data will be visible and accessible to editing by other users, subject to permission settings *(see Project members)* and your user type *(see User types)*.

The status bar in the right bottom corner of the application window will reflect an active connection to a multi-user database and will show your user name as it is specified in your network. The user is identified by the full username, i.e. `UserName@Domain`.

You may switch the connection to single-user database mode at any time, if you're working in the multi-user database *(see Connection settings)*. You can connect to multiple multi-user databases (one at a time) by changing the connection settings (subject to SQL Server logon settings).

Connection settings

To change the database connection settings, press the home menu button and select `Account`.
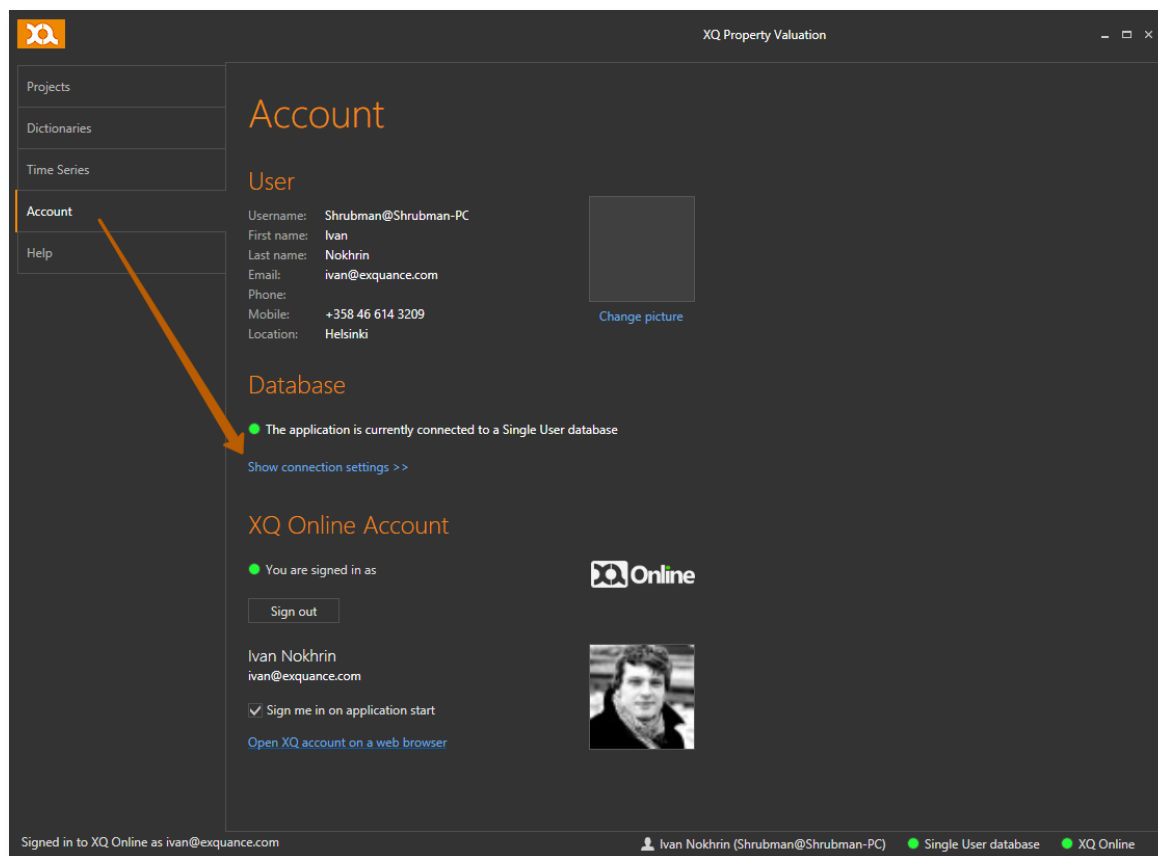
Then on the account page, press 'Show connection settings' option to view the database connection options and settings. The `Database Connection Settings` page will automatically display the tab corresponding to your current database mode.

If you're connected to a single-user database, and you wish to switch to the multi-user mode, click on the `Multi-User` tab.
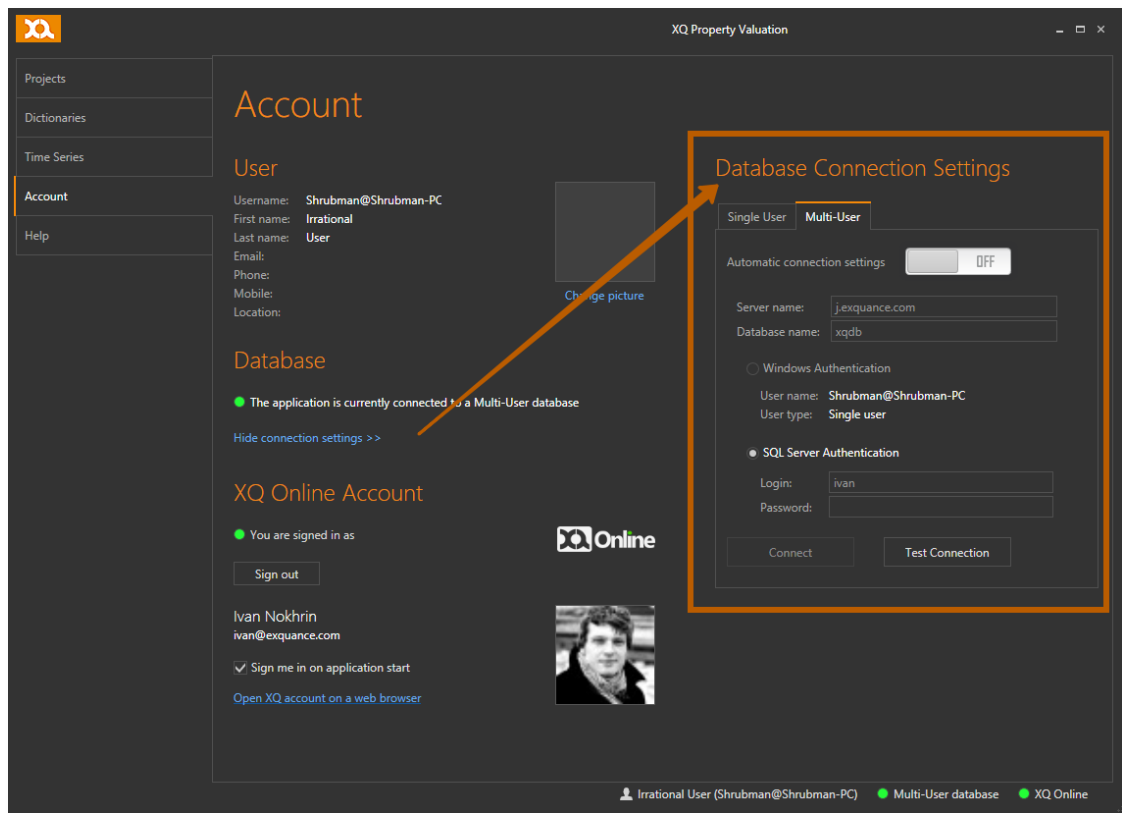
You can slide the `Automatic connection settings` switch to `On` position to attempt to read connection settings set up by your IT administrator.

> **"**
> *Where can I see which database I'm currently connected to?*

In the `Multi-User` tab you need to make sure that the `Automatic connection settings` is switched to `Off` position in order to see the connection details of the database to which you are currently connected.
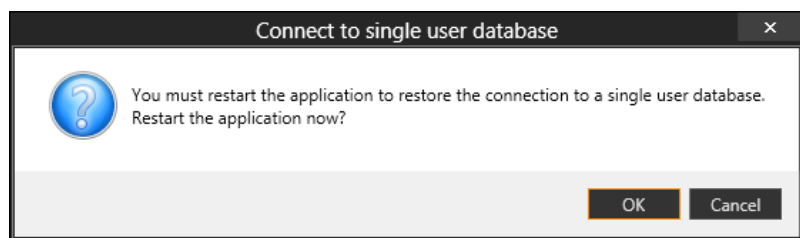
If you would like to connect to another multi-user database, you need to input the connection details (server name, database name, and credentials) and press the `Test Connection` button. If the connection is successful, the `Connect` button will become enabled.

When you press the `Connect` button, the application will prompt you for a permission to restart. All your current work will be saved automatically before restarting.

> *In the future versions of the application changing the database connection will be possible in runtime, without restarting.*

Saving and synchronization

In a multi-user environment, all users who are simultaneously logged in to the database may see and/or edit each other's input, subject to project membership and permission settings *(see Project members)*.

At any time, while working in the application may press `F5` (or `Ctrl+S`) to apply his own latest changes and pull all the recent changes from the shared database. If the user doesn't have a permission to change the analysis data, he can still make changes, but those changes will be visible only to him and will not be saved to the shared database.

Depending on the volume of your recent changes, it may take a few moments for the data to be synchronized. You can see the status bar in the bottom left corner of the application screen for messages `Synchronizing...` when the data saving and reading is in progress and `Ready` when it's done.
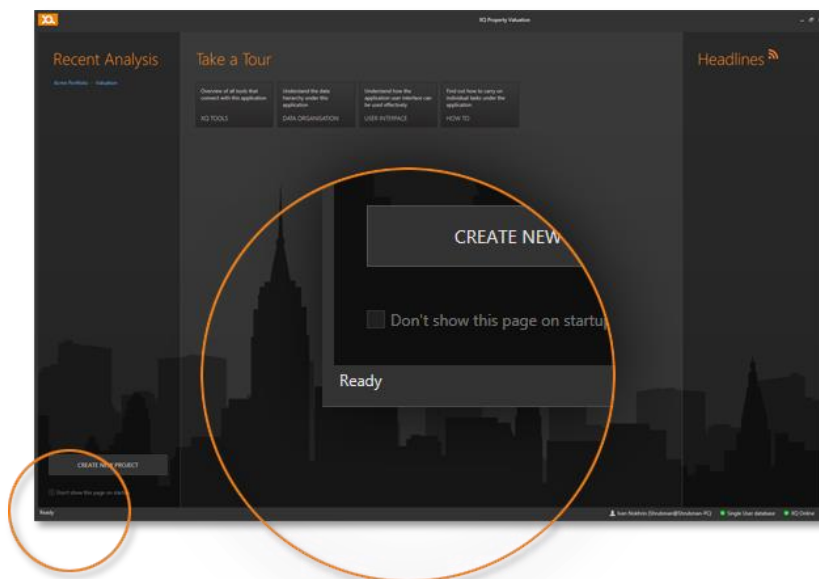
It is recommended that the user synchronizes often to make sure the current working context is up-to-date, especially when there are many users working on the same analysis. It is important to remember that any latest changes of the same input data will prevail.

> *In the future versions of the application it will be possible to set up auto-sync function which will be saving the user's changes at a given time interval, or, alternatively, synchronize every time anybody (including the user himself) saves changes to the shared database.*

User types

User types or global roles are defined by the system administrator. Based on the global role, the user will have certain privileges in the application which allow to read data, edit data, and sign off (and lock for changes) complete analyses. These privileges cannot be changed from within the application and they are different from permissions which are set by project owners and project managers on project level *(see Project members)*.

Valuator

The **valuator** user type suggests that the application be used by a valuation department specialist who is typically involved in a broad range of business activities such as providing an insight on property market segmentation and trends, assessing present market value of existing and to-be-developed individual properties and portfolios as well as participating in creating appropriate acquisition and exit strategies for end clients. It is expected that the valuator has an in-depth understanding of the valuation standards and techniques, property financial information, such as financial statements, property segment and market sector data. It is also expected that the valuator should have full understanding of wider real estate business information such as relevant economic data and political events.

In the application, users with valuator privileges have full edit rights and can create and alter projects, analyses, property data, market and property assumptions, etc. A valuator may be assigned a 'supervisor' role by a supervisor user for a particular project *(see Project members)*, then the valuator can sign off (and lock for editing) completed analyses and extract reports from the application application. A valuator without a 'supervisor' role can extract reports only for previously signed off analyses *(see Supervisor)*.

Valuators are skilled to examine and interpret data from different sources to understand the impact of internal and external factors on property market value. The valuator is expected to research primary property data and relative market data, and create a valuation model to make a comprehensive valuation report compliant with industry general standards and local valuation standards to the end clients.

Researcher

The **researcher** user type suggests that the application be used by a specialist in the research department or by a specialist responsible for collecting aggregated data for statistical and other purposes, including publishing such data to third parties. Researcher shall have restricted access to aggregated property information, imagery, key assumptions, averages and ratios, interactive maps with geolocation data, and will be able to upload market assumptions based on the research data (subject to approval by a supervisor).

A researcher cannot be granted permissions to add new projects or analyses or edit the data in the application.

Supervisor

The **supervisor** user type suggests that the application be used by a valuations director or by an executive-level personnel who is responsible for overseeing the appraisal assignment, communicating and defending the valuation results to the end clients.

In the application, the supervisor has a right to delegate supervision (on a project-by-project basis) to other users *(see Project members)*, and to sign off completed analyses. Signing off is a special built-in function allowing to lock the analysis (financial model input) for further editing and hence enable its extraction (into a report file or an online interactive report). The extraction of interim reports and ad hoc export are accessible to valuators at any time, however, the reports will have

a non-removable watermark indicating that the extracted report had not been approved by a supervisor *(see Report builder)*.

"

Are these global roles mutually exclusive? Can a researcher be a supervisor at the same time?

The global user roles are not mutually exclusive as far as `supervisor` user type is concerned. Primarily there are two main global roles: Valuator (data editor and writer) and Researcher (data reader). Supervisor is the additional role to those, however a user can be assigned only to the supervisor role and have read-only access to the data. Thus the mostly privileged user would have both valuator and supervisor roles.

◼ Data structure

Project

All the data in the application is organized in projects and analyses (valuations). One project contains one or more analyses. A project is an umbrella term for a series of valuations of the same portfolio of assets. It is possible that the composition of assets inside analyses may change over time (when assets are acquired or sold). Nonetheless, the project contains a set of assumptions which will be used for the valuation (e.g. growth rates, currency pairs etc.)

The set of assumptions used for valuation is defined on the project level and is accessible from each analysis under this project. The forecast values for each assumption are set on the analysis level. E.g. an assumption for growth rate may be called "CPI forecast" and it will be available as an indexation in each of the analyses inside the project, but the annual growth values will be set as of each analysis date separately *(see Analysis)*.

To open the project, you need to open one of the analyses contained therein. You may single-click the recent analysis name from the `Recent` section of the start page.
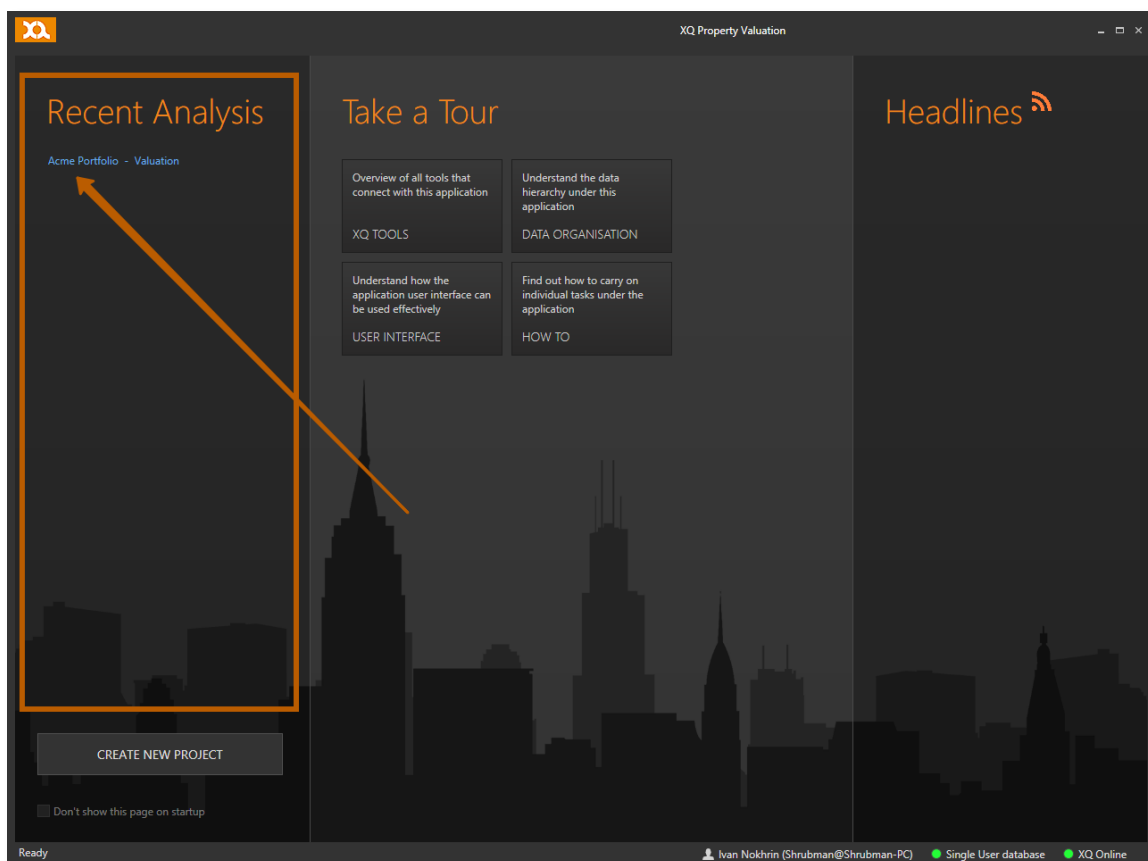
Or you can press the home menu button ▓▓ and select `Projects`. In the `Projects` section you will see the list of projects accessible to you subject to your permission and project membership *(see Project members)*. Single-clicking the

project name will allow you to rename it, and double-click will open the most recent analysis in this project. When you select a project, you will see the tree of analyses contained therein *(see Analysis tree)*. After you select the analysis to open, press `Open` button in the `Analysis` section, or double-click on the analysis name.
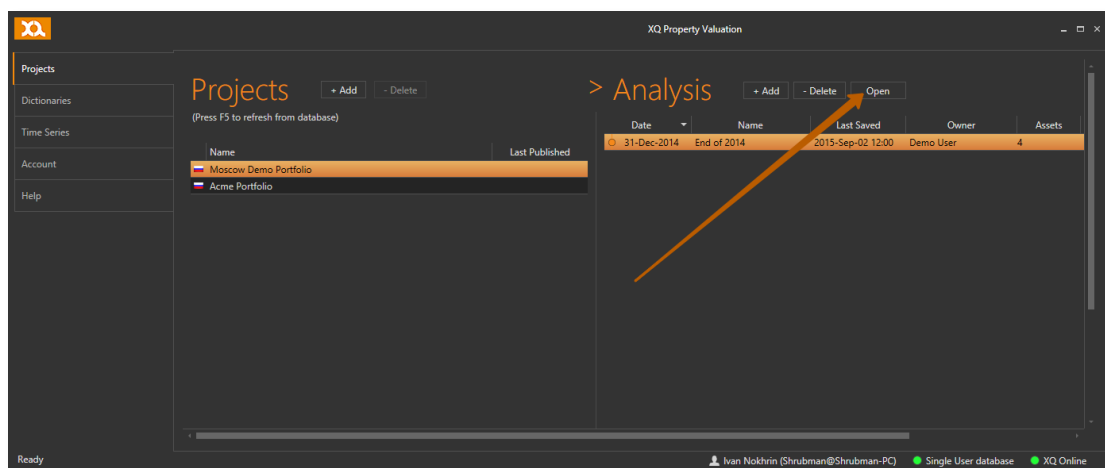
To start a new project, you can press the `Start new project` button on the start screen when the application opens, or press the `+ Add` button in the `Projects` section of the home menu to bring up the `Create New Project` dialogue window.

You will be prompted to enter the project name and project country. Set the country where your project's assets are located. If you have a multi-country project, you can add other countries later from the `Countries` dictionary *(see Dictionaries - Location)*.

Once you select a country from the list, a default country's standard will be chosen automatically *(see Standards and consistency)*. The standard defines which collection of cash flow templates will be used for your project *(see Cash flow template)*.

Analysis type determines whether the financial model you're about to create will contain only forecasted cash flows *(see Cash flow forecast)* and asset-related input (Valuation type) *(see Assets)*, or it will have historic cash flows and legal structure with company-related input (Investment Analysis type).

> The 'Investment analysis' type is not accessible in XQ Property Valuation application.

Analysis date means that all the assumptions you make under this analysis will be valid as of this date, so as the cash flows will be forecasted from the following date forward (the date mentioned under 'Forecast starts') *(see Analysis)*.

Analysis currency means the currency which will be automatically set as default input currency and valuation display currency. The currency will be automatically selected based on the country you chose, however if you set a different currency here, the country's default currency will be nonetheless added to the project and you can use it as input currency, but you will need to provide FX rates forecast for conversion *(see FX rates)*.

When you press the Create button, your new analysis within the new project will be created and automatically open for further editing assets and assumptions. If you wish to immediately share the newly created project with your colleagues,

press the Home Menu button Home Menu Button and navigate to Members section for the project to add new project members *(see Project members)*.

When the analysis is open, you will see the project's name and the analysis name in the window title of the application.
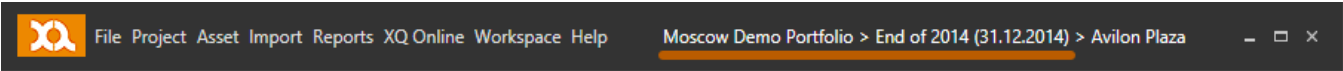
Navigate to the `Project` tab in the main application window. The `Project` tab contains the sub-tabs for assumptions and the `Project dashboard` for aggregate output *(see Project dashboard)*.
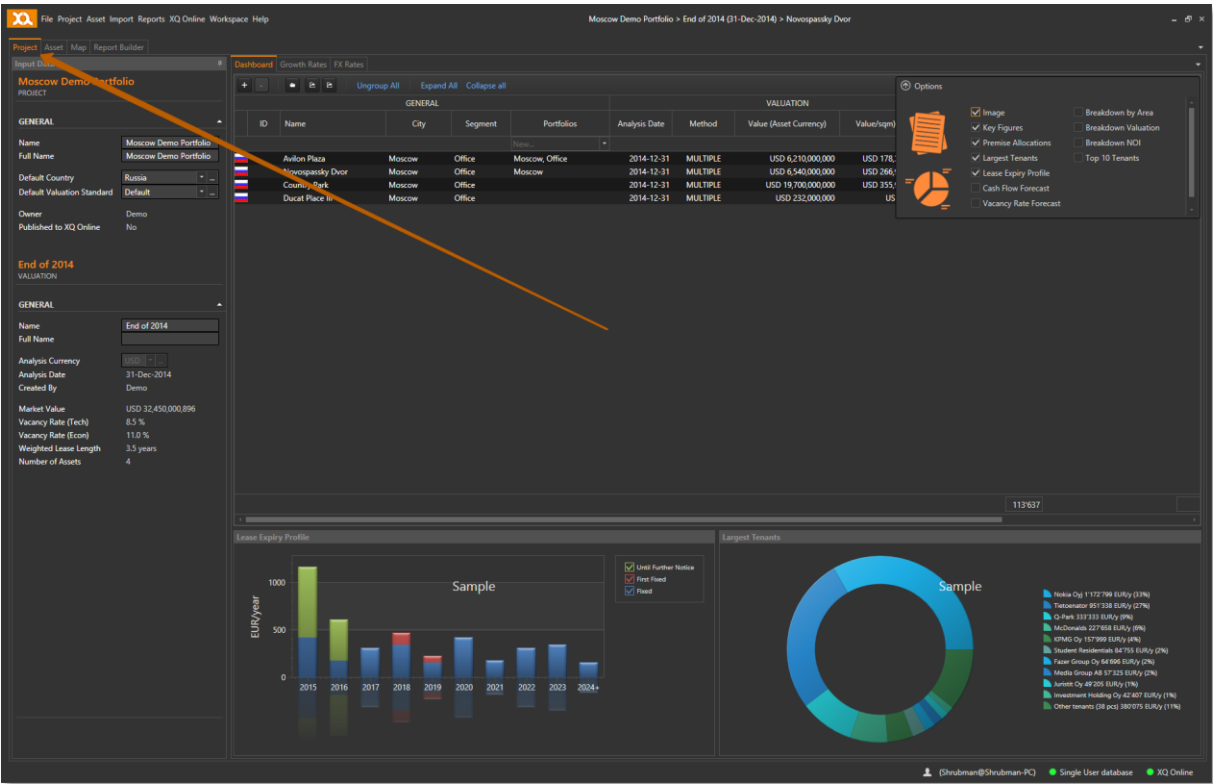
The `Project` tab also has the `Input Data` window which holds general data about the project and the analysis which you have opened.

Input data

When you have opened a project, in the `Input data` window you will see and will be able to edit (subject to your permission and role) the project's title (Name and full name) and the same of the currently open analysis.

In the `General` section of the project's input data it's possible to select a default country and define a default valuation standard to be applied for newly created assets inside this analysis. After you select a country, the default standard for its country will be selected. It's possible to edit the standard's cash flow template(s) or define a new standard *(see Dictionaries - Valuation).* Below you can see the current project owner and the link to an interactive report published on XQ Online *(see Interactive reports online).*

In the general section for the analysis you can also set the `Analysis Currency` which will be set as the display currency for values in the `Valuation model` *(see Valuation model).* The analysis currency will be suggested as the valuation currency for each newly added asset (and will be selected as the default currency for further input of monetary values for the asset). The selection of the Analysis Currency will also affect the display aggregate figures on the consolidated level.

> **"**
> *Can I select a different currency? How many different currencies?*

It is possible to select only one currency at a time as Analysis Currency, however, you may add any number of currencies to the project by selecting a new currency from the currencies dictionary *(see Dictionaries - Market).* In order to see the effect immediately, edit the FX rate assumptions for the currency pairs, which will be automatically added when you select a new currency *(see FX rates).*

Changing the project's title will affect all of the analyses and will be used in the reports *(see Report builder).*

Project members

For each user the list of projects is populated with projects where the current user is an owner or a member. The user automatically becomes a project member when he creates a new project.

Current project owner (author) as well as project members (those users who will see the project on their application's project list and hence will be able to open analysis for reading and/or editing) are visible under the project list on the `Members` section. The `Members` section is only visible in a multi-user database mode.

Each project must have an owner and every project member can have the following privileges:

`Manager` - means the project member can add, remove, and change permission settings of other project members (except for the project owner, his permission settings cannot be changed and he cannot be removed from project members, unless the ownership is delegated to another project member). The `Manager` privileges can be changed by clicking the checkbox in the column 'Manager' on the members list in the `Members` section.

`Supervisor` - means the project member has privileges to sign off completed analyses and lock them for further editing. A user must have a global supervisor role *(see User types)* in order to assign another project member to be a supervisor for a particular project. By default, when a user with the global supervisor role is added as a member to a project, he is granted the supervisor privileges for the particular project, however the supervisor may assign one (or more) other project member(s) to be supervisors within one project.

`Permissions` - means a set of permissions allowing users to edit and manipulate the data inside the analysis. Only the project managers with the privilege to `Set permissions for project members` can change the permissions set for project members other than themselves. When the user is a project member with `Permissions` set to `(none)`, such user will see the project on his project list and can open any analysis inside that project, but will not be able to save any changes to the existing data inside the analysis, nor to add new objects (assets, properties, etc.) in that analysis. A user with no permissions will not be able to extract any report or export any data from the application. The permission sets (Unlimited access, Full edit access, and Limited edit access) grant the following privileges to project members:

| Permission	Permission sets		
	Unlimited access	Full edit access	Limited edit access
Create a new analysis	ALLOWED	ALLOWED	ALLOWED
Delete an existing analysis created by another user	ALLOWED	ALLOWED	RESTRICTED
Alter input data in an existing analysis created by another user	ALLOWED	ALLOWED	ALLOWED
Export analysis data into a file*	ALLOWED	RESTRICTED	RESTRICTED
Unlock a previously signed off analysis	ALLOWED	ALLOWED	RESTRICTED
Unlock a previously signed off asset	ALLOWED	ALLOWED	RESTRICTED
Push data to the server and/or mobile device(s)	ALLOWED	RESTRICTED	RESTRICTED
Pull data from the server and/or mobile device(s)	ALLOWED	ALLOWED	RESTRICTED
Publish an interactive report on XQ Online*	ALLOWED	RESTRICTED	RESTRICTED
Remove a previously published interactive report from XQ Online	ALLOWED	RESTRICTED	RESTRICTED
Set permissions for project members	ALLOWED	RESTRICTED	RESTRICTED

* extracting final reports is only possible for signed off analyses

> *In the future versions of the application it will be possible to add custom permission sets with various combinations of the listed permissions.*

To view the project members, press the home menu button and select `Projects`. Then single-click the name of the project you're interested in. The `Members` section will appear below the project list.
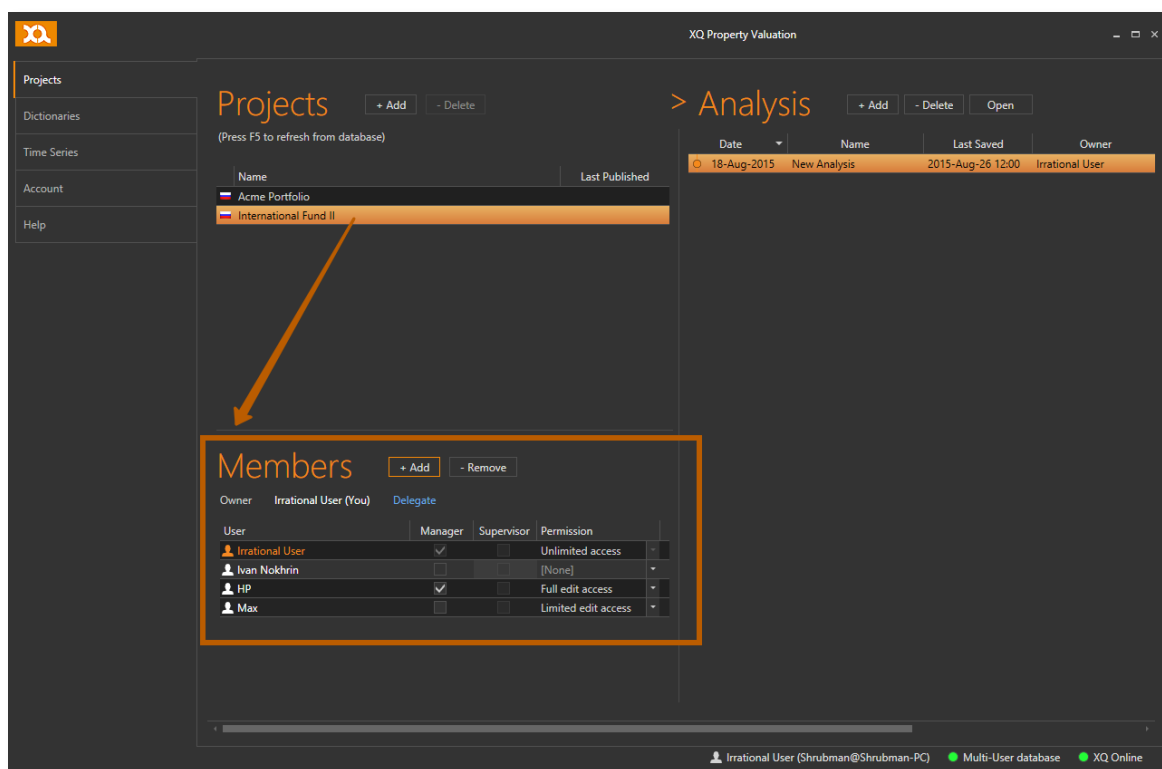
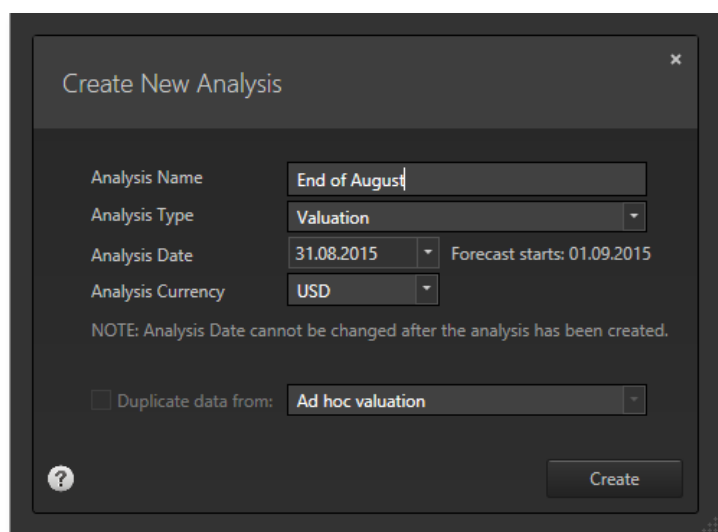*The project ownership delegation will be available in the future versions of the application.*
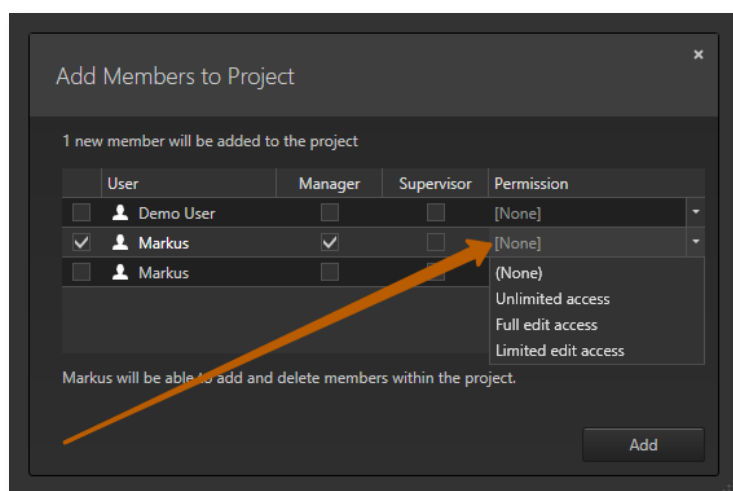
The project members will be listed sorted by user name. The privileges of each project member can be changed directly in the list (subject to your own privileges in a particular project). A project manager can add new members and remove existing members from the project.

To add a new project member, press `+ Add` button in the `Members` section. In the appeared dialogue window you will see all the users who are logged in to the same database as you and who are not yet the project members of the current project.

You can set the privileges (define project manager(s) and supervisor(s) and select the data edit permission set) for the newly added members directly in the `Add new members` dialogue. After you press `Add` the selected users will be granted access to the current project and will see it on their projects list.

Analysis

`Analysis` is a point-in-time snapshot of the project. Each analysis has its analysis date (valuation date) as of which all the values contained within this analysis are valid. All forecasts and extrapolations will follow the analysis date, the annual periods in the forecasts are calculated as 12 months, starting from the analysis date *(see Forecast calculation principles).*

When creating a new analysis, you are prompted to input the basic data for analysis (same as when creating a project *with* the analysis).

Analysis date means that all the assumptions you make under this analysis will be valid as of this date, so as the cash flows will be forecasted from the following date forward (the date mentioned under 'Forecast starts') *(see Analysis)*.

Analysis currency means the currency which will be automatically set as default input currency and valuation display currency. The currency will be automatically selected based on the country you chose, however if you set a different currency here, the country's default currency will be nonetheless added to the project and you can use it as input currency, but you will need to provide FX rates forecast for conversion *(see FX rates)*.

In this version of the application, it is not possible to change the valuation date after the analysis has been created.

Each analysis can be given a title (name and the full name) to differentiate it easier in the list of analyses. You can enter the analysis title when starting a new analysis (or project) and edit the analysis name at any moment in the `Input data` window under the `Project` tab *(see Project – Input data)*.

Input data
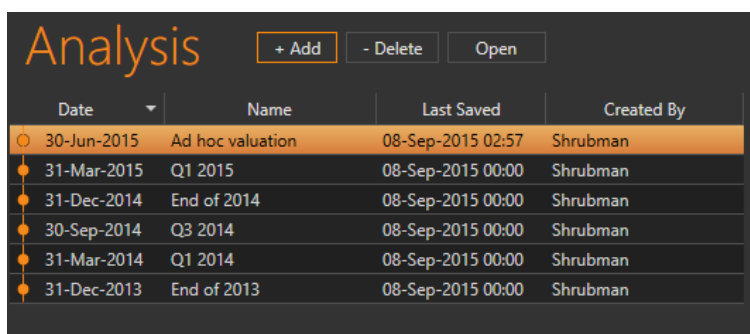
The analysis general data is accessible for editing (subject to your role and permission settings) in the `Project` tab's `Input Data` window. Here you can change the analysis title and select the `Analysis Currency`.

You can add a new currency to the project by selecting it from the 'Currencies' dictionary *(see FX rates).*

Each analysis holds the forecasted time-series values for the assumptions like Growth rates and FX rates. You may edit these values in the corresponding sub-tab under the `Project` tab. If you add a new assumption (a new growth rate or currency pair), it will appear on all the analyses under this project.

Analysis tree

As point-in-time snapshots of the collection of assets, analyses form a tree, which can be viewed in the `Analysis` section of the `Projects` in the home menu. The data used for a single valuation is stored under an Analysis. Each Analysis has a name, date, and currency. All information about assets, properties, assumptions, valuation settings etc. contained in the analysis is considered valid as of the analysis date (or valuation date).

If you think of projects and analyses as folders and files, any `analysis` is always a part of a `project`. Every project must hold at least one analysis, but may hold an unlimited number of them. A set of properties subject to valuation may be constant throughout every analysis or varying. Same assets valued time and time again can be later compared like-for-like.

You may wish to organize valuation data in such manner that the name of the project is the name of a property portfolio or a name of your end client. Therefore every analysis made under that project will be stored chronologically and it will be easy to navigate between them or use their data to cross-compare assumptions or assets' appraised values over time.

In the future versions of the application, it will be possible to 'branch' an analysis by copying its assumptions. You would be able to create any number of copies of the same analysis (at the same date or at a different date). Therefore it will be possible to make several 'scenarios' of the same asset composition but using different assumptions, or compare earlier analyses with today, etc.

Dictionaries

Dictionaries are reference tables which contain items with description of objects, classifications, formats, and other definitions used in the application. When you make changes to a dictionary, the units you modify / add will be accessible to all the other users connected to the same database. Renaming an item which is already used in some valuation will change its appearance everywhere. Any user, regardless of role and permission setting can make changes in the dictionaries. *(see Forecast calculation principles).*

> *In the future versions of the application it will be possible to protect a dictionary item from changes as well as change an individual user's permission to restrict editing dictionaries.*

It is impossible to delete an entry from the dictionary when it's used in an analysis or in another dictionary. To delete such an item, you should delete first the item referring to it.

> *In the future versions of the application it will be possible to mark an item for deletion, so that when it becomes free of referring items, it will be removed automatically. Alternatively, there will be added a reference finder, helping users to find which items refer to this item.*

Dictionaries are divided into major groups: location, market, real estate, rent roll, valuation, and document.
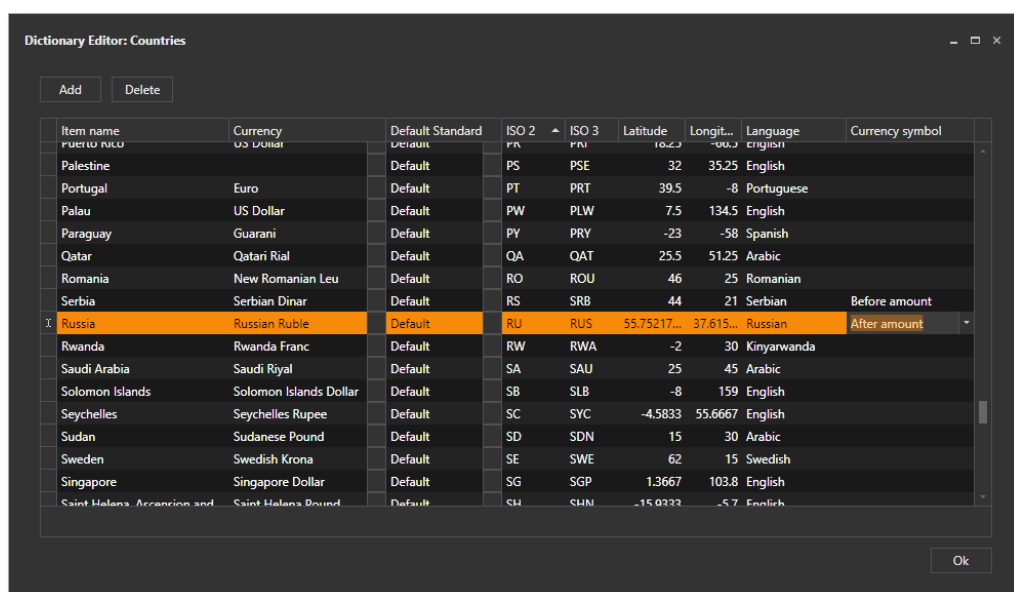
Location

This group of dictionaries contains definitions of the physical assets' and companies' locations such as countries, regions, cities, and microlocations (or submarkets).

Countries is a list of countries with ISO 3166-1 country codes (alpha-2 and alpha-3). Countries have default currencies, standards, languages, etc.

Countries are attributed to projects, analyses and assets.

Each country has a default geolocation (geographical center of the country or, the capital city) and a map layer shape to visualize country-specific indicators.

Default standard defines which Cash flow template will be selected by default when a new asset is added in that country *(see Cash flow template)*. The selected country for a particular project becomes the default country for newly added assets and growth assumptions. Currency of the asset's country is used as a base (payment) currency for calculation purposes *(see Project)*.

Regions are territorial subdivisions within each country which may be administrative or geographic areas. They can be used for expanded analytical purposes by geographic location rather than submarket. Regions are not linked to cities and are optional for assets. For more specific analytical breakdown of commercial locations, please use 'Microlocations'

Cities dictionary contains a list of cities within each country. Cities contain microlocations. Cities are attributed to assets and properties, they serve the purpose of analytical breakdown. Each city has a geolocation. By default, the database contains only major cities of the world. New cities can be added manually at any time. Alternatively, new cities will be added to the dictionary, when a new asset is added from the map and its location is determined automatically.

Microlocations dictionary is a list of submarkets. Territories within each country and/or city can be broken down into submarkets based on custom market classification. Each microlocation has geographic coordinates and can be shown as a pushpin or area on the map which can be turned on or off in the map layers.

> *Possibility to add/edit areas on the map will be available via 'map layers' control, which will be included in the future version of the application.*

Market

The `Market` group of dictionaries contains collections of currencies, their pairs for exchange rates definition, and growth rates which can be used as indexations (or escalators) for analysis assumptions.

Currencies dictionary contains a list of currencies with ISO 4217 currency codes, full names, and conventional symbols. The currencies are attributed to projects and are used for conversion purposes in the calculations.

Exchange rates is a collection of foreign exchange instruments, which are based on a currency pair. This list of currency pairs is used as assumptions for setting cross-rate forecasts and converting the values in the calculations. In order to make FX rate forecasts, you must first add the FX currency pairs in this list. When you add a new country to a project in the

application, an FX instrument will be automatically added to the dictionary (if such currency pair is not yet in the collection) based on the analysis currency and the country's currency *(see FX rates)*.
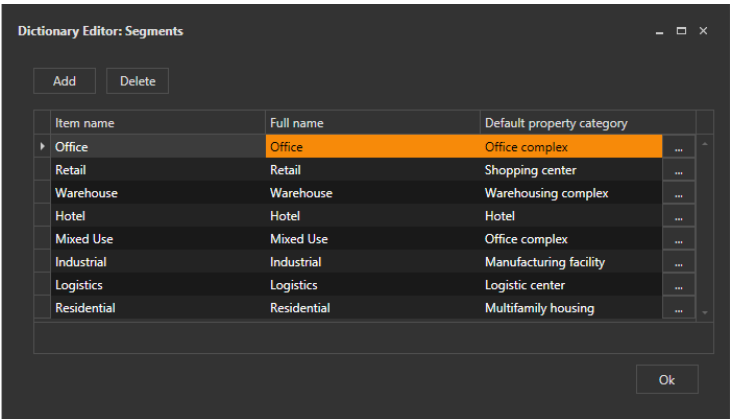
Growth rates is a collection of macroeconomic indicators used as indexation profiles (or growth rates) in the calculations. Each growth rate can be forecasted specifically for an individual country. *(see Growth rates).*

Real estate

The `Real estate` group of dictionaries holds definitions and classifications related to the real estate markets. These dictionaries should reflect the methodology, accepted classifications and common approach of the users. These dictionaries hold values which are independent of locations.

Segments dictionary has a collection of real estate segments which are attributed to assets. A segment implies the prime positioning of the asset (e.g. retail, office, etc.) Segment classification is used for aggregate indicators and grouping of assets. When you specify a certain segment for an asset, you may choose any property category for the properties of which the asset is comprised, however, it is possible to set a default property category for a segment (e.g. segment 'Retail' can have a default property category set to 'Shopping center', so any new property added to an asset in the segment 'Retail' will be assigned that category automatically).
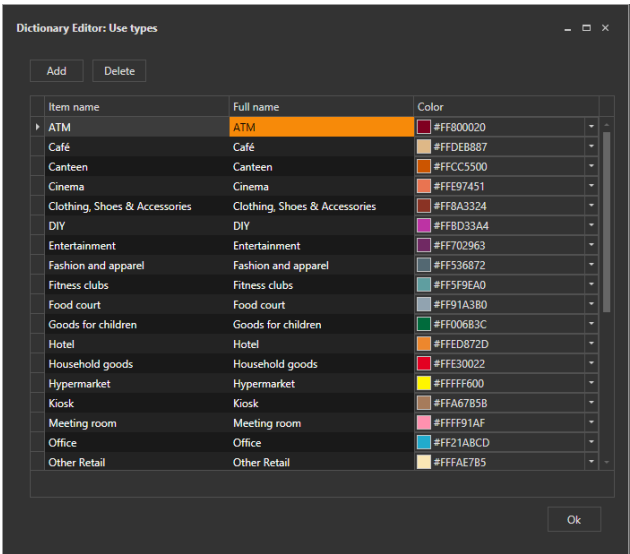
Property types are defined for each property contained within an asset. You must select a core property type when creating a new property (land, building, utility) and then define particular type (e.g. detached house, multi-storied building, land plot for individual housing, etc.) Property types usually represent the physical / functional layout of the property and are attributed to properties and can be used for grouping, reporting on aggregate indicators, etc. Each property have rent roll input (i.e. generate rental revenue for calculation purposes) and have floors. You can disable rent roll input and/or adding floors to any property type you define.

Property categories Category of the property means main functional layout (e.g. principal layout of a building can be shopping center, warehouse, etc.). This is attributed primarily to buildings, but can also be used for land and utility property types. Each category has a collection of use types which are attributes to property's premises (e.g. storage, kitchen, meeting room etc.) Each property category can be classified according to its commercial attractiveness (e.g. class A, B+ etc.). You can set a collection of use types to be accessible for each property category under 'Property use types' dictionary and define the classification for each property category under 'Property classes' dictionary.

Property classes are user-defined classification of properties which reflects its commercial attractiveness and quality level. In the comment field you may specify which classification is used for the class designation.

Use types dictionary contains a list of unique use types attributed to premises (which are contained inside properties). This list holds only unique use types (e.g. meeting room, kitchen, supermarket, etc.), to edit the use types available for a property of a certain category, use the 'Property user types' dictionary.

Property use types are collections of use types available for specification of premises main use type within a property. You must select a property category and a use type to be able to select it for a particular premises inside a property. You can select multiple use types for each property category.

In order to add a new use type to a property category, you can press the `Group` button to view the available use types for each property category. When you press `Add` button, a new use type will be added for the property category you're focused on. You may select a use type you would like to add from the dropdown list by pressing the ▼ button.

If you wish to add a use type which is missing from the underlying 'Use types' dictionary, you can press the ▦ button which will open the 'Use types' dictionary and allow you to add a new item and then select it by pressing 'Ok'.
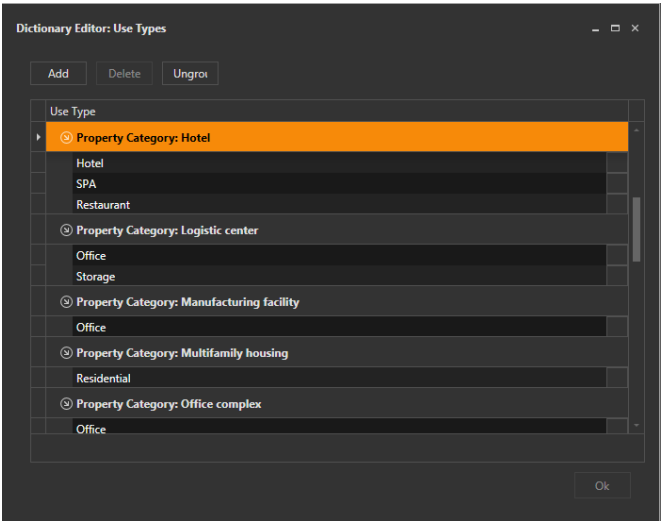
Rent roll

The `Rent roll` dictionaries are related to tenants and their classification.

Tenants dictionary contains a list of tenants which are attributed to rent roll. Each tenant has a name and a brand name (for reporting and analytical purposes). Tenant list also may contain CRM-related information (e.g. contacts, addresses, etc.) Tenant classification is used for term & reversion calculations and also for grouping and analytical purposes.

> "
> *Is the tenant dictionary project-specific? If I add/edit information about a tenant, can other users who are not my project members see it?*

Tenant information is not project-specific and therefore it's available to all users who have access to the database. However, this information is limited only to the CRM detail and classification (no lease agreement data is disclosed via this dictionary outside a particular project).

You can edit tenant classifications in the 'Tenant classification' and 'Tenant classifiers' dictionaries. When you change a tenant's class, it is recorded as of the current date, i.e. changing classifiers for existing tenants will not affect earlier analyses (unless they are intentionally updated). However, if you change a tenant's name or any other CRM-related information, it will be changed in all rent rolls where this tenant is used.

Tenant classification dictionary defines groups of classifiers for tenant classification (e.g. Credit rating, Brand recognition grade, etc.) Each classification may hold a collection of classifiers available for attributing to individual tenants. You can use this dictionary to add criteria, based on which it will be possible to change certain assumptions (e.g. adjust yields and other related input for Term and Reversion valuation, etc.). Also, tenant classification allows a more detailed analysis of a large portfolio of assets where analytics by each individual tenant can be too overwhelming.
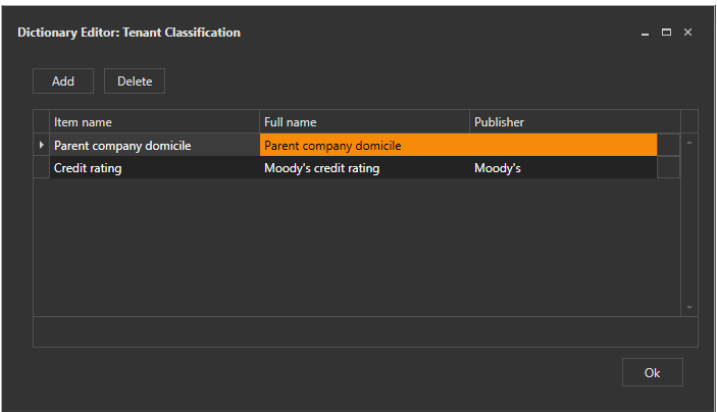
Tenant classifiers dictionary holds a collection of classifiers for each tenant classification (e.g. Primary / Secondary, International / Domestic etc.) This list holds collections of individual classifier values for each classification. The classifiers are attributed to individual tenants. You can enter any number of classifiers for each classification.

Valuation

This group of dictionaries defines the modeling standards and the collection of templates to be used for valuation.

Standards dictionary has a definition of standards *(see Standards and consistency).* Standard is a preset combination of a default cash flow template and a default valuation method used for a specific country. When you create a new project, analysis, and/or asset, the standard is the source of default settings, which can be changed manually. Said combination saved as a standard makes a difference for cash flow consolidation purposes and consistency of comparable data when comparing analyses.

Cash flow templates dictionary contains a list of cash flow templates. A cash flow template is a collection of cash flow items (revenue items, expense items, etc.) for calculation purposes *(see Cash flow items).* You may define any number of cash flow templates to help you quickly get started with a new analysis. Once you select a cash flow template, it will populate the financial model for a newly created asset. Cash flow template is used for calculation input and output. Each cash flow item's values can be used for reporting. Templates are used for consolidation purposes and consistency of comparable data when comparing analyses *(see Standards and consistency).*

Document

The `Document` dictionaries define types and the sources (publishers) of the files attachable to objects inside the application.

Document types dictionary is a list of custom defined document types for files which may be attached to objects inside an analysis or to the analysis itself. Such document types are used to ease navigation and allow document tagging (e.g. Valuation report, Photo, Floor plan, Property title etc.)

Publishers dictionary contains a list of publisher names for reference (e.g. Market overview type of document can have as publisher the name of the real estate consultants). You can set a URL for each publisher, however if you wish to set a URL to a particular document, you may do so under 'Document' details.

Business process

◼ Input data

Assets

Asset is the target for valuation, so in an analysis assets have the market value (not individual buildings inside each asset). Therefore if you wish to determine a value of a group of buildings which share the operating expenses (and it is impossible to split them), you can combine these buildings as properties inside an asset.

All the input and calculation data for asset is accessible under the `Asset` tab in the application window. Under the `Asset` tab you will see the functional sub-tabs (e.g. Layouts, Rent Roll etc.) and the `Input Data` window which will contain input data for the selected object. Also the functional tabs can change their contents depending on the selected object (e.g. Layouts tab will show floor plan if a floor is selected, or stacking plan of the building if the building is selected, Rent roll will be filtered by the selected property or floor).

The tree of objects under the asset is visible in the `Navigator` window. You can select an object by single-clicking its name in the `Navigator`.

The senior branch of the tree is asset, the navigator displays the basic input data for the asset in the tree (Country and Name).

> *In the future versions of the application the Navigator window will be able to display a thumbnail of the asset's picture as well as other asset's details (e.g. city, segment, etc.).*

The next branch shows the properties contained inside this asset. The icon before the property's name will indicate the type of the property, e.g. 🏠 means that the property is a building *(see Properties)*.

The next level of the asset tree shows the floors marked by the icon ⬙ . The floors in turn contain premises marked by the icon ⊞ . The premises can be added directly to a property without specifying any floor (then <no floor> will be displayed instead of the floor name).

To create a new asset, press ➕ in the `Navigator` window.
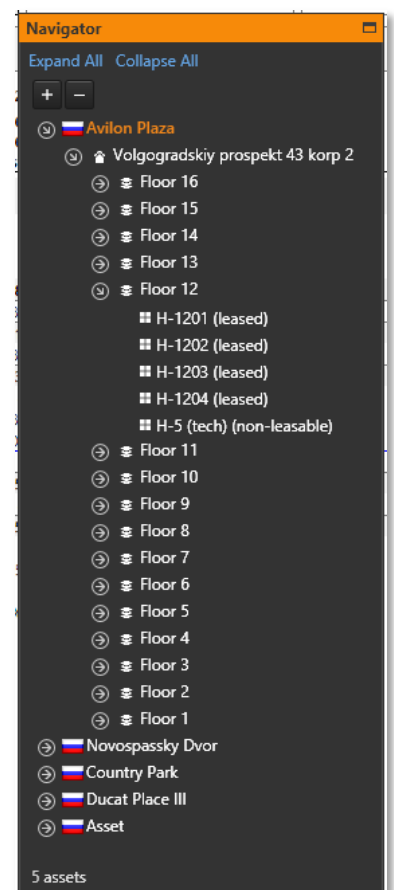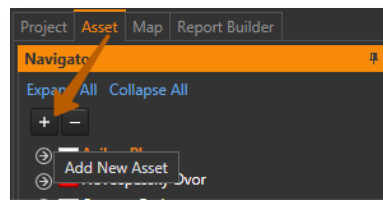
Alternatively you can press the similar ➕ button in the project dashboard.
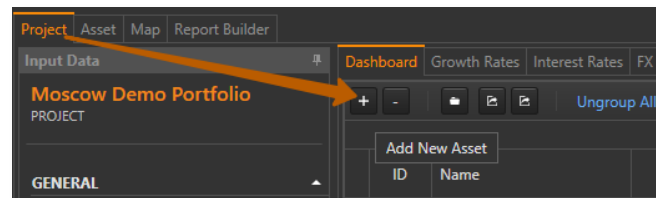
Or you can create a new asset from the geolocation on the map. Switch to the `Map` tab and right click on the selected location.
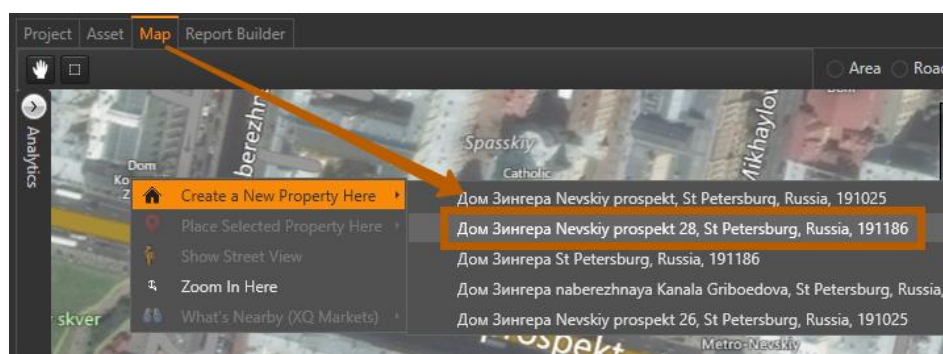
Then navigate to the `Create a New Property Here` context menu item. If the location is recognized by the map engine, you will be given a choice of addresses, and in some cases the asset's names.

Select the one that suits your asset and the new asset dialogue window will appear, containing the asset's name, geolocation, and address.

Asset's country defines which currency will be used for conversion of the cash flows generated by this asset. (e.g. in Russia it will be RUB, considering that no matter in which currency income or expense is nominated, the payments are always carried out in RUB).

`ID` is an optional unique identifier of the asset outside of the application (e.g. for synchronization with CRM system).

`Segment` means the primary market segment to which the asset is attributed (e.g. Retail, Office, etc.). `Submarket` is an optional geographical micro location definition for the area where the asset is located.

Are all these fields required? Can this data be changed/input later?

The only required fields are Name and Country, because based on the country, all the principle assumptions (growth rates, FX rates, etc.) and the cash flow template (based on the country's default standard) will be determined. It is advised (but not required) that you scan through all the fields before pressing `Create`. You can change almost any of this input data at any time by editing the input data *(see Assets – Input data).*

An asset cannot be created without a property, so it is required that a property be created when you're creating a new asset. By default, your latest selection will be automatically chosen when you navigate to `Property` section of the dialogue.

There you can select the kind of the property that will be created for your new asset. The choice that you have is building, land, or utility.

You may select a type and a category for the selected property kind. You may define your own classification at any time *(see Properties – Input data).*

When selecting the property type, you are prompted to enter the dimensions for the property (GBA – gross building area and/or Quantity for 'Building', Area for 'Land', and Quantity for 'Utility').

Note that the idea of defining a property as a part of the asset implies that the property is

used for generation of continuous rental income. However, if you wish to add full details to an asset and enumerate, e.g. parts of property, plant & equipment which have their own value, but don't generate any rental income, it's still advised that you insert information on them separately (as separate properties inside the same asset).

In the `Valuation` section of the dialogue you will be prompted to select a standard and the cash flow template to be used for this asset. You can skip this setting, because the values will be inherited from the analysis settings, however, you may wish to select a different cash flow template or define a new standard as well as alter the Valuation Currency.

In the case when you select a cash flow template different from the default one selected for the analysis, such asset will be excluded from the consolidation until the mapping of concrete cash flow items is done *(see Cash flow template).*

After this is checked, you can press the `Create` button to create the asset record in the database and populate its cash flow items to create the valuation model.

Input data

The `Input Data` for asset has different views: General data, Valuation *(see Valuation model)*, and Indexations.

To switch to General data view, press the [icon] icon. This view contains the following sections: General, Location, Portfolios, Attachments.

GENERAL

- **Name** – the name of the asset as it will be displayed in the application
- **Full Name** – the full name of the asset for use in the reports (optional)
- **ID** – external identifier of the asset, which corresponds to a unique asset ID outside the application (e.g. in CRM system)
- **Segment** – primary market segment to which the asset is attributed (e.g. Retail, Office, etc.)
- **Description** – verbal description of the asset's market characteristics (can be inserted into reports etc.)

LOCATION
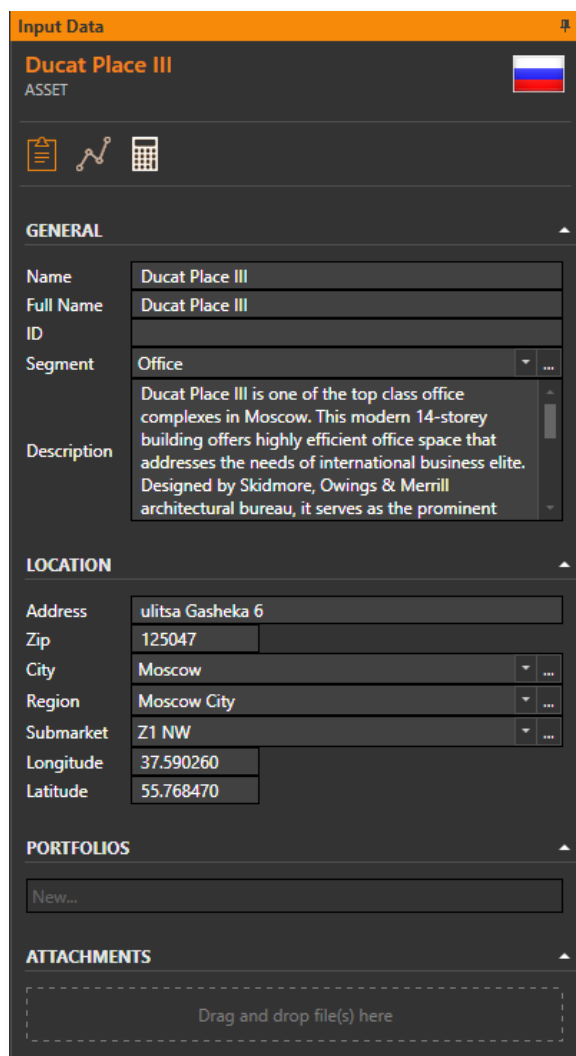
- **Address** – street address of the asset (primary address in the case when asset contains several properties)
- **Zip** – postal code
- **City** – where the asset is located. Cities are selected from the dictionary 'Cities' by country. A new city will be automatically added to the dictionary if it doesn't exist, if asset is created from the map
- **Region** – administrative division of the country (optional)
- **Submarket** – a geographical micro location where the asset is located. Submarkets are defined for each country (optional)
- **Longitude/Latitude** – geo coordinates of the asset's location

PORTFOLIOS

Each asset can be a part of a group of assets in the project, which is called `Portfolio` in the context of the application. A portfolio is simply a virtual tag attached to each asset, so that the user may quickly filter assets in a large project. To add an asset to a portfolio, simply start typing a portfolio (group) name in the input field in `Portfolio` section.

Predictive auto-fill will recognize the name which you're typing and suggest any matching existing portfolio names. You can remove an asset from a portfolio by simply clicking the delete ⊗ icon next to the portfolio name.

You can use quick filter on the `Project Dashboard` to select certain groups of assets based on these portfolio tags *(see Project dashboard).*

ATTACHMENTS

It is possible to attach any kind of file(s), whether it be scanned titles, agreements, images, or Excel models, to any asset. You can select a document type for each file for easy sorting and searching among multiple documents. Document types can be defines in the dictionary *(see Dictionaries – Document).*

To switch to Indexations view, click the ▦ icon. You can select a growth profile (or indexation forecast) for Market Rent Growth and Market Value Growth from the list of `Growth Rates` which you set up for the project *(see Growth rates).*

To learn more about the `Valuation` data view, please refer to *Valuation methods* and *Valuation model* chapters.
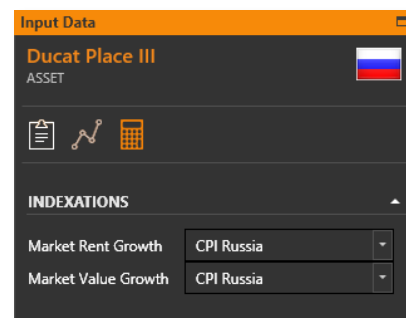
Properties

In the application context, `property` means the tangible fixed asset which is a part of the asset (in the context of the application). In terms of financial definition, this is equivalent to PPE (property, plant and equipment). In the context of the application, there are 3 core property types: building, land, and utility. In the Navigator window, each property type is marked with its own icon:

🏠 **Building** repesents a structure (permanent or temporary), whether it be part of a larger structure (built-in) or unfinished construction, multi-storied (i.e. has floors) or single-level, can be a stand-alone house or a part of a larger complex, consisting of walls, roof, underground facilities etc. The 'building' property type may have a book value and depreciation schedule (for investment analysis purposes).

▪ **Land** means any land parcel or territory which is owned on a freehold or leasehold base by a company and is qualified as a real estate on its balance sheet. The 'land' property type may not have levels (floors) nor depreciation schedule. When 'land' property is a part of the asset (in the application context) and represents an underlying land plot, it does not have a separate market value, however if the asset consists only of land properties, it can have a market value.

⚙ **Utility** means various equipment, which is considered a fixed asset (e.g. hoisting equipment, HVAC systems, light boxes, etc.) and which may generate regular income (e.g. lease agreement in retail which includes renting an advertisement space) and may have a value of its own (e.g. uninstalled part of a HVAC system in a building which is valued separately).

Each core property type can be further classified using the following dictionaries *(see Dictionaries – Real estate)*:

- **Property types** are defined for each property contained within an asset. You must select a core property type (land, building, utility) and then define particular type (e.g. detached house, multistoried building, land plot for individual housing, etc.) Property types are attributed to properties and can be used for grouping, reporting on aggregate indicators, etc.
- **Property categories** mean main functional layout (e.g. principal layout of a building can be shopping center, warehouse, etc.). This is attributed primarily to buildings, but can also be used for land and utility property types. Each category has a collection of use types which are attributes to property's premises (e.g. storage, kitchen, meeting room etc.)
- **Property classes** represent the classification of properties which reflects its commercial attractiveness and quality level. Each property category can be classified according to its commercial attractiveness (e.g. class A, B+ etc.)
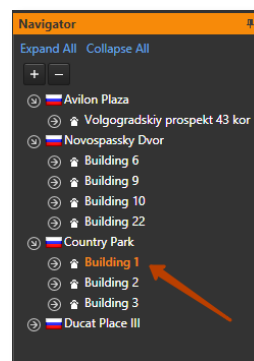
Input data

To edit the input data for a property, you need to select the property by clicking on its name in the `Navigator` window.

The `Input Data` window will then reflect the details of the property. The header contains the property's name and core type (e.g. 'Building 1' and 'Building') and will also show the icon of the property.

GENERAL

In the `General` section of the `Input Data` window you can edit the property name, full name and address. The address will be inherited from the asset, but you may edit it for each particular property (where applicable).

Select property type from the dictionary `Property types`, select the property class for the selected type. *(see Dictionaries – Real estate)*.

You can type in a detailed property description to be used in reports *(see Report template design)*

Depending on the selected core type of the property, you will be prompted to enter the dimensions of the property: GBA – gross building area in sqm (or quantity for e.g. parking places) for building, area in sqm for land, or quantity for utilities.

ATTACHMENTS

Attachments area is designed to hold links to associated documents which can be uploaded to the shared database and linked to a particular property. Such documents can be any additional source information (e.g. property title, inventory, official paper scans, Excel calculations, etc.) which you can sort by document type. Document types can be defines in the dictionary *(see Dictionaries – Document)*.

"
Where is the gross area input used?

GBA or area or quantity are optional, because the useful area (leasable) is calculated based on the premises input *(see Premises and rent roll)*. However, this value is used when calculating e.g. value per sqm of GBA.

Floors

If the property type allows the property to have floors *(see Dictionaries – Real estate)*, when you create a new property of that type, a new 'Ground floor' will be added automatically. It is possible not to specify any floors to a property, in this case all premises contained therein will be grouped under '<No floor>' group. Later you can drag them to newly created floors *(see Premises and rent roll)*

At any moment you may navigate to the property in the `Navigator` window and call the context menu by right-clicking on its name.

The options are: Add New Floor(s) or Delete the selected floor. If you proceed with adding a new floor (or several) you will see the dialogue window prompting you to enter the basic data for batch-adding many floors at once.

If you wish just to add one floor, simply press Enter after the dialogue window shows up. You can rename and redefine the primary use for the floor later on at any time.

If you wish to create many floors at once, enter how many new floors should be added, and what auto-naming settings the batch process is using.
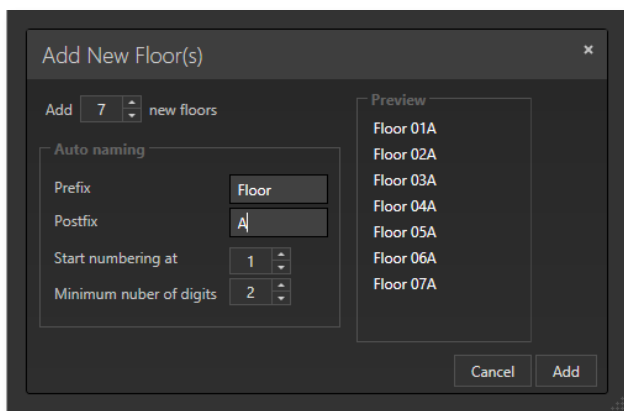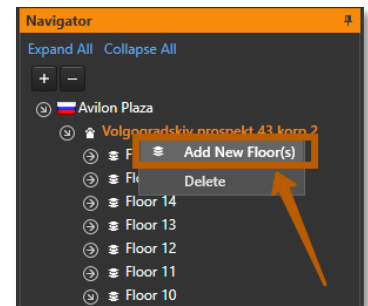
You can scroll the mouse wheel over the number of the floors to change the number or enter an integer value of new floors to be created. Also enter prefix and/or postfix text to be added to the floor's name.

Start numbering at value can be changed to match the latest numbered floor (please note that there will be no conflict when 2 or more floors with similar names are created). Minimum number of digits will add extra zeroes in front of a figure shorter than the set minimum.

In the 'Preview' section you can immediately see what floors will be created when you press `Add`.

When the property is selected in the `Navigator`, the `Layout` tab will be showing the stacking plan, demonstrating a visual breakdown of the property by floors. You can drag-n-drop the bars representing the floors in the `Layout` tab to re-arrange the floor order. You may click the floor's name in the stacking plan to open that floor's floor plan *(see Layouts – Property layout).*

Premises and rent roll

Premises are individual rooms or areas of the property which are subject to lease terms and hence generate a rental income. Premises have dimensions (area or quantity) and the total thereof comprises the GLA (gross leasable area) or gross leasable quantity and GBA (gross building area) or gross quantity (only when non-leasable premises are included).

Premises have a life span, i.e. the beginning and end date of each premises' existence. Defining these dates is optional, by default a premises "lives" through the life of the property it's a part of. However, if you need to model a situation when two or more rooms get merged into a single one at some point in time, you can do it by defining a 'Life end date' for the individual premises and then creating a new premises with the same 'Life start date'. The monthly multiplier will be calculated proportionately *(see Value validity span).*

Premises also have a status which display's the premises' state as of the analysis date. The possible stati are:

- `Non-leasable` - means the premises is not suitable for rent (therefore all rental agreement data input and market rental data input *(see Rent roll)* will be ignored.

- `Vacant` - means the premises is suitable for lease but is not subject to any lease contract as of the analysis date (or after that date).
- `Leased` - means the premises is suitable for lease and is contracted under existing lease agreement as of the analysis date.
- `Future` - means the premises is suitable for lease and is contracted under existing lease agreement which starts after the analysis date.

Input data

To add a new premises, press ➕ in the `Rent roll` tab. To edit premises input data you need to select the premises by:

1. single-clicking on its name in the `Navigator` window, or
2. double-clicking on its shape in the `Layout` tab when a floor plan is showing *(see Layouts – Floor plans)*, or
3. single-clicking the premises' row in the `Rent roll` tab *(see Rent roll).*

When you have selected a premises, you will see its name in the application window title, e.g.

Moscow Demo Portfolio > End of 2014 (31-Dec-2014) > Avilon Plaza > Volgogradskiy prospekt 43 korp 2 > Floor 16 > H-1603

The `Input Data` window will display all the available input for the selected premises. In the header along with the standard name and type of the object (e.g. H-1603 premises) you will see the current premises' status (e.g. Leased), the premises' color and a navigation icon which signifies that the premises has a shape associated with it on the floor plan.

The main sections of the premises' input data are dimensions, market rent, speculative leases, lease agreements, term & reversion.

DIMENSIONS

- **Number** – the name (or number) of the premises
- **Use** – primary purpose of the premises' use as of the analysis date (depending on the property type, from the Property Use Types dictionary)
- **Area** – total area of the premises in square meters
- **Life span** – beginning date and end date of the premises' life
- **Leasable** – a flag specifying if the premises is able to generate rental income

MARKET RENT

- **Market rental rate** – estimated market rental rate
- **Market rent (ERV)** – estimated rental value of the premises based on the market rental rate
- **General vacancy** – general loss from vacancy and bad debts assumption (as a share of ERV)

SPECULATIVE LEASES

- **Improvement cost** – estimated cost of the premises improvement in order to make it attractive to a new tenant (when current lease agreement ends, if applicable)
- **Prior idle time** – assumed vacancy period in months between the end date of the current lease agreement and the beginning of the estimated market-level new lease term
- **Brokerage fee** – assumed lease commission paid to a broker for the new market-level lease agreement.

LEASE AGREEMENTS

- **Tenant name** – the current tenant (as of the analysis date) is selected from the 'Tenant' dictionary *(see Dictionaries – Rent roll)*. The field shows the tenant's legal name. Once you select a tenant, the premises will change its status to 'Leased'. You may select a tenant from the dictionary by typing its name in the input field (the matched variants will show up in the context dropdown list):
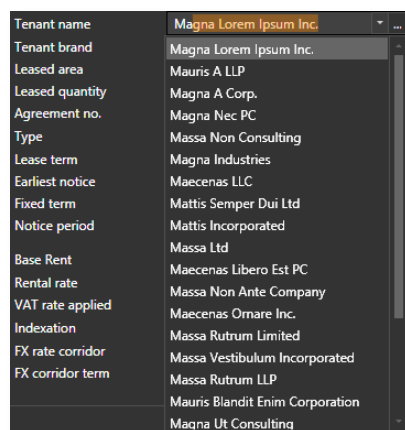
  You can select a tenant from the list of tenants by pressing the ▼ button, or from the dictionary window (you can open the dictionary by pressing the ⋯ button). If you wish to add a new tenant, which does not yet exist in the dictionary, you can do it in the dictionary window or simply by typing the full name of the new tenant into the input field and pressing 'Enter' (the tenant will be added to the dictionary and you will be able to add new details later via the dictionary by pressing the ⋯ button *(see Dictionaries – Rent roll)*.

- **Tenant brand** – a brand name used by the tenant (useful for consolidating by brand name, e.g. when a group of companies operates under the same trade name).
- **Leased area / quantity** – the total premises area as specified in the effective lease agreement (when you add a tenant, the area/quantity will be inherited from the premises' dimensions, however you can manually change it according to the actual figure in the agreement).
- **Agreement number** – the number of the lease agreement
- **Type** – defines how the forecast will be calculated, select one option:
    - o Fixed – fixed start and end date of the lease;
    - o UFN (until further notice) – an agreement with an open end date;
    - o First fixed – an agreement with a fixed term, after which the agreement becomes UFN.
- **Lease term** – the fixed lease term (beginning date and end date).
- **Earliest notice** – the date when earliest notice is possible according to the lease terms (for UFN type).
- **Fixed term** – the date on which the 'first fixed' period ends (for First fixed type).
- **Notice period** – the minimum period of time in months between the given termination notice until the termination of the lease agreement.
- **Base rent** – monthly capital rent amount as specified in the lease agreement in the currency in which the rent is nominated (you can select a currency from the dictionary if it has not yet been added). The conversion of the rental income will be always made to the country's currency in which the actual payments are made *(see FX rates)*.
- **Rental rate** – monthly base rent per sqm of the premises' area (for reference and comparison with the market rental rate assumption)
- **VAT applied** – value-added tax rate included in the rent (i.e. if the base rent amount includes VAT, specify the VAT rate so that the cash flow forecast will be calculated net of VAT).
- **Indexation** – annual growth rate applied to the base rent amount *(see Growth rates)*.
- **Indexation recurrence** – recurrence pattern defines on which month(s) of the year the selected indexation will be applied to the base rent.
- **FX rate corridor** – minimum and maximum FX rate applied to the currency pair (asset's country currency and the Base rent nominal currency). If these values are not null, the specified FX rate will override the forecasts, if forecasted FX rate is out of bounds.

- **FX corridor term** – the beginning and the end date of the term when FX rate corridor is applied (if null, the FX rate corridor will be applied during the whole term of the lease agreement duration).

Rent roll

The `Rent roll` tab is designed to give an overview of the rent roll for the asset in a familiar table-style. The input data for premises is accessible here in the form of columns. The input data sections are bands with input fields shown as column titles below.

You may filter the list of premises in the `Rent roll` tab by selecting different object level in the `Navigator` window, e.g. if you select asset, you will be able to view all the premises in all the properties under this asset, if you select only property, the list will be filtered by 'Building' column, and floor respectively.

It's possible to sort the list by any column (single-click on the column name), apply additional filtering or conditional formatting (right-click on the column name and select the function from the context menu).

You may also re-order columns (by dragging and dropping) within one band and hide unnecessary or unused columns by opening the 'Column/Band Chooser'. To do so, right click on any column name and select the function to 'Show Column/Band Chooser'.

When the column/band chooser opens, you can drag columns (bands) to and from it to the header of the rent roll tab.
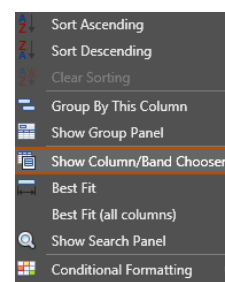
Is Rent roll tab showing exactly the same data as Input Data window for premises? What is the difference?

The `Rent roll` tab contains selected fields from the premises input data (you can select which fields are shown, see above). However the main functionality of `Rent roll` tab as opposed to individual premises `Input Data` window is processing premises in groups:

Filtering the premises by asset/property/floor – the rent roll table will be automatically filtered by the selected object in the `Navigator` tree.

Rental rates are entered as values per sqm per month, what if it's not market practice?

In the tool bar of the `Rent roll` tab you can see the switch

Excel import wizard

You can use a built-in XQ Excel Import Wizard to import rent roll data from Excel files. Any Excel file can be used as a data source for Wizard. Wizard will allow you to map the source and the target fields and convert the source values in a very flexible manner. The mappings can be saved for future regular use for consistent source files.

To open Wizard you need to select a property to which you wish to import the rent roll data. Select the property in the `Navigator` window by single click.

Then open the `Rent roll` tab and click the XQ Excel Import Wizard button (it will be enabled when a property is selected). Alternatively, from the main title menu 'Import' select > 'Rent roll from Excel'.
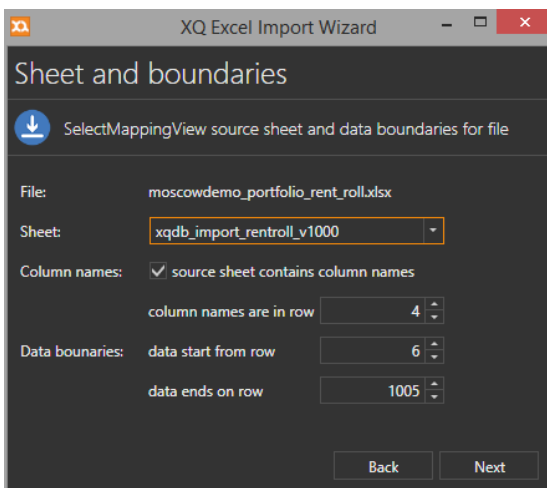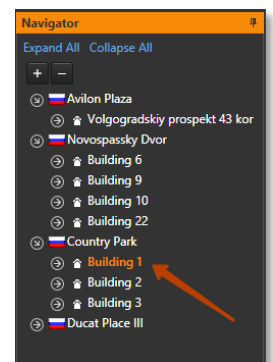
When the Wizard opens, you will be prompted to browse for the Excel file you would like to import. When you've selected a file, press 'Next'.

In the next step, please select the Excel sheet from which you want to import data.

Check the checkbox 'source sheet contains column names' if your source file contains a row with column headers.

Wizard will attempt to automatically recognize where the data begins and ends, however you should double-check that the data boundaries were recognized correctly before continuing. Wizard will ignore empty rows and also will give a warning when data in columns is inconsistent (e.g. when some rows contain date and others text in the same column). In case of data format inconsistency, you would have to check the source Excel file and correct it, if necessary.

In the next step Wizard will prompt you for a custom name for the mapping you're about to make, you can select a previously saved mapping (if any) or give any name to the new mapping.

At the same time Wizard reads and analyses the source file. You will see a window 'Preview of data records' next to Wizard's main window. All the rows from the source file will be organized in a table manner and you can browse through the records to check if the source table was parsed correctly and all the columns and rows are present.

You can map the rent roll columns to the source data columns by dragging and dropping from the 'Preview of data records' window to Wizard's main window. To see the available mapping type for each column press the ▾ button. If you wish to remove a previously set mapping, select 'Leave empty', then the column will be ignored.

Many target rent roll fields can be mapped as 'collection to collection' which means that the source file has a column with repeating values (e.g. use column for premises), so when mapping collection to collection, you will have to map each unique source value to the target value from the corresponding dictionary. E.g. if you're mapping 'use' column from your source file which contains premises use types (office, retail, etc.), drag the column from the preview window to the corresponding field in the Wizard main window. The 'collection-to-collection mapping' button will appear and the mapping input field will give the following message:

When you press the button, Wizard will analyse all unique source values and try to match it with the target dictionary. Closest matches will be suggested to you in the mapping window.
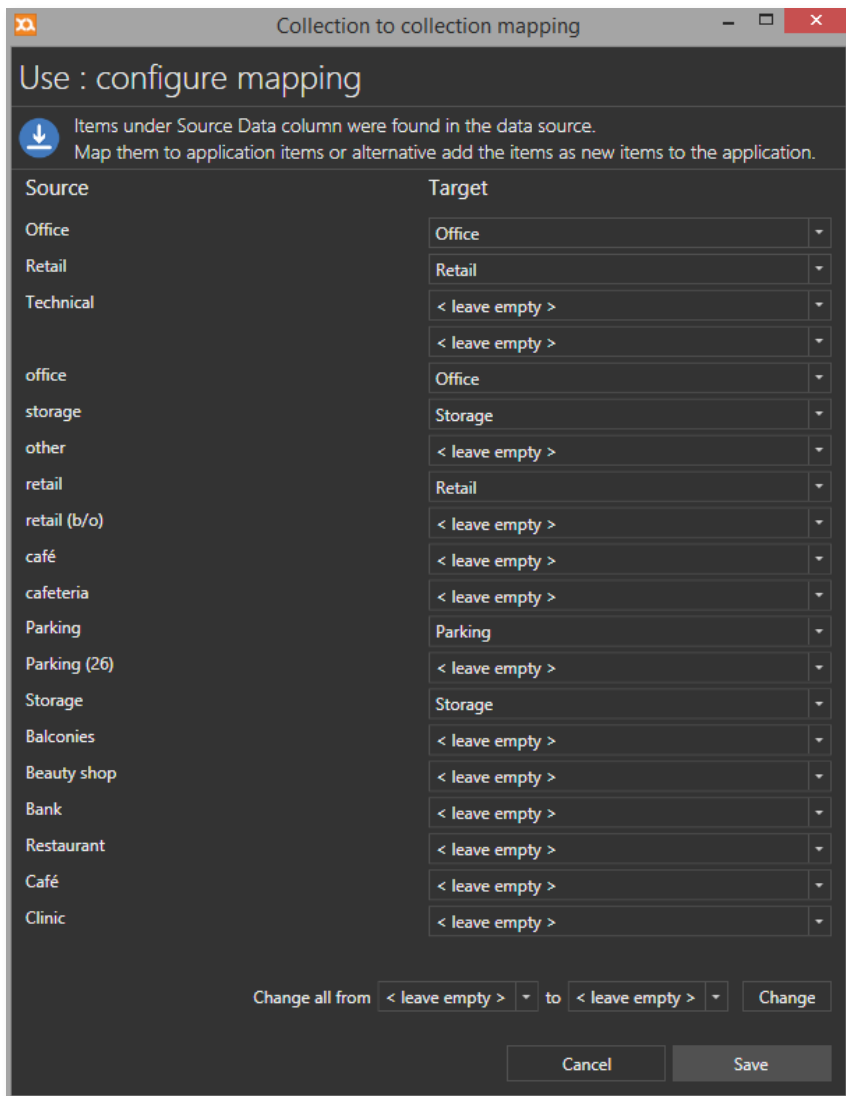
The unrecognized values (when no match found in the target dictionary) will be by default set to < leave empty >.

It is advised that you go through them one by one and define the correct behaviour for each value.

The option is to select a correct target entry or set the mapping to <create new>. In this case the source value will be recorded in the target dictionary.
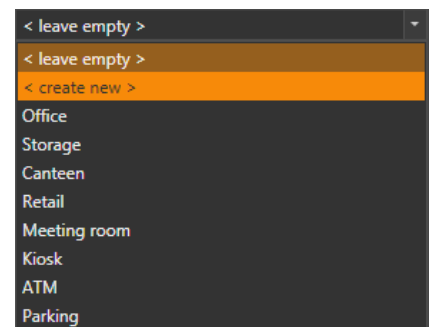
To speed up this process you can use the 'Change all from … to …' option at the bottom of the window. E.g. you can change all <leave empty> to <create new> and press 'Change'.

Now if you press 'Save', all the unrecognized values will be added to the target dictionary. If you are uncertain that the mapped column was a correct choice, press 'Cancel' and no changes will be made.

For columns like Area, Rental rate etc. the mapping can be of type 'Map directly' when the source and the target values are figures (i.e. no collection mapping necessary). Another option of mapping is 'Calculate from expression'. In this case you may enter a simple arithmetic expression with column references in the square brackets:

E.g. if in the source file you have a base rental rate in column B and premises area in column A, in order to map it to 'Base monthly rent' (which is the total monthly amount) you would need to type (or drag the corresponding column): [B]*[A]

It is also possible to write boolean expressions in order to determine the target Boolean value based on source value (e.g. if source value is equal to zero/null, insert 'VACANT', etc.)
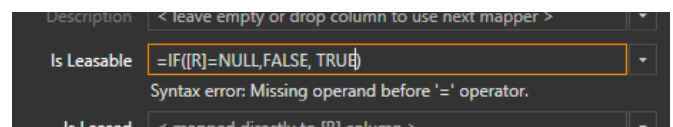
During the mapping you can press 'show preview' button to see how the source values are converted. After all the fields are mapped, Wizard will analyse the source data once more and, if no issues, it will ask you to press 'Import' button to begin import.

When importing is done, you can close the Wizard window by pressing the 'Close' button.
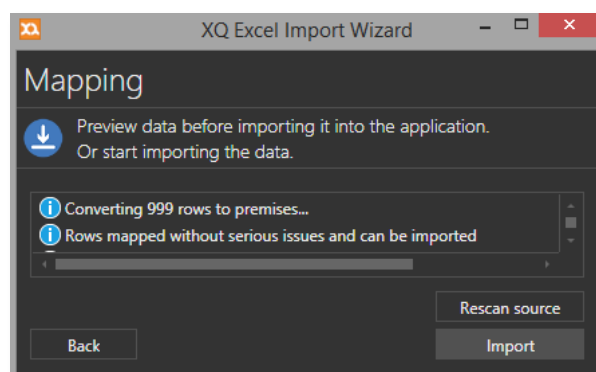
Operating expenses

[This section is being updated]

Capital expenditures

[This section is being updated]

Comparable assets

[This section is being updated]

Assumptions

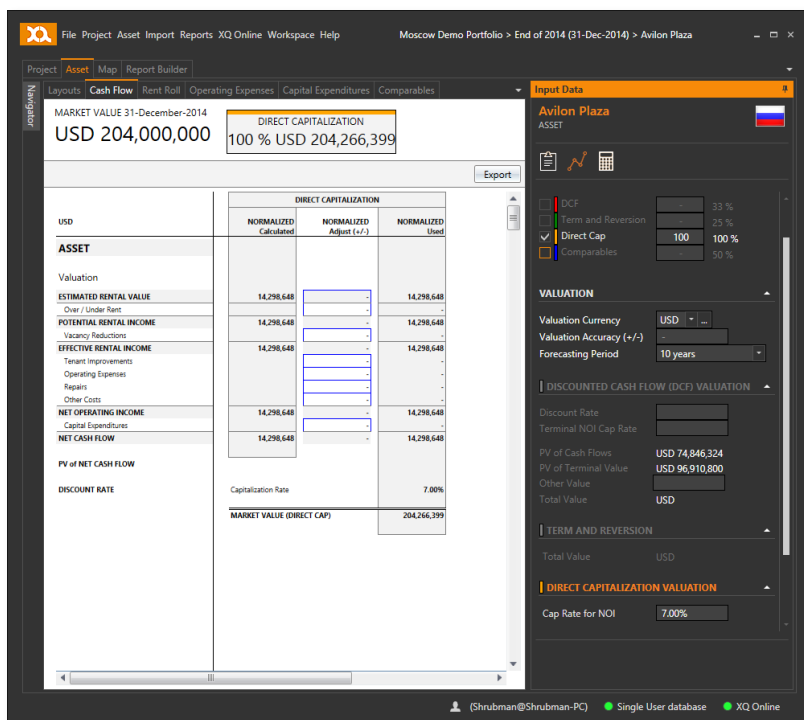[This section is being updated]

Growth rates

[This section is being updated]

FX rates

[This section is being updated]

■ Calculation engine

Valuation methods

The calculation engine of the application is designed to run the modeled calculations in real time. This means, as in any spreadsheet-like environment, any change you make to the input data will immediately have an effect on the resulting and related values.
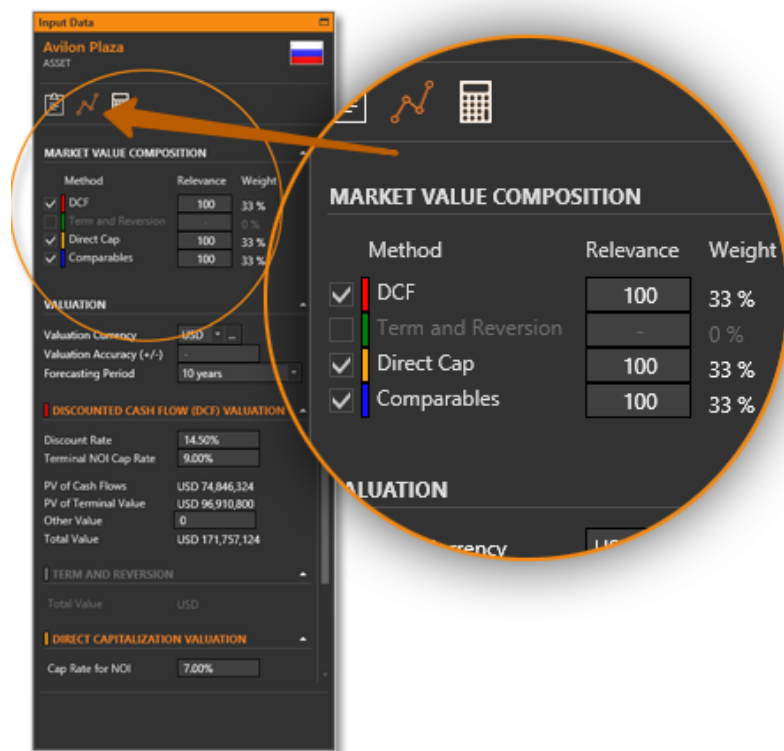
The market value for each asset in an analysis will be recalculated automatically as you insert the input data.

In order to view the current calculated market value of any asset, you need to select an asset (by single-clicking on its name in the Navigator), go to its `Input data` window and press the valuation icon to select the `Market value composition`.

Discounted cash flows

[This section is being updated]
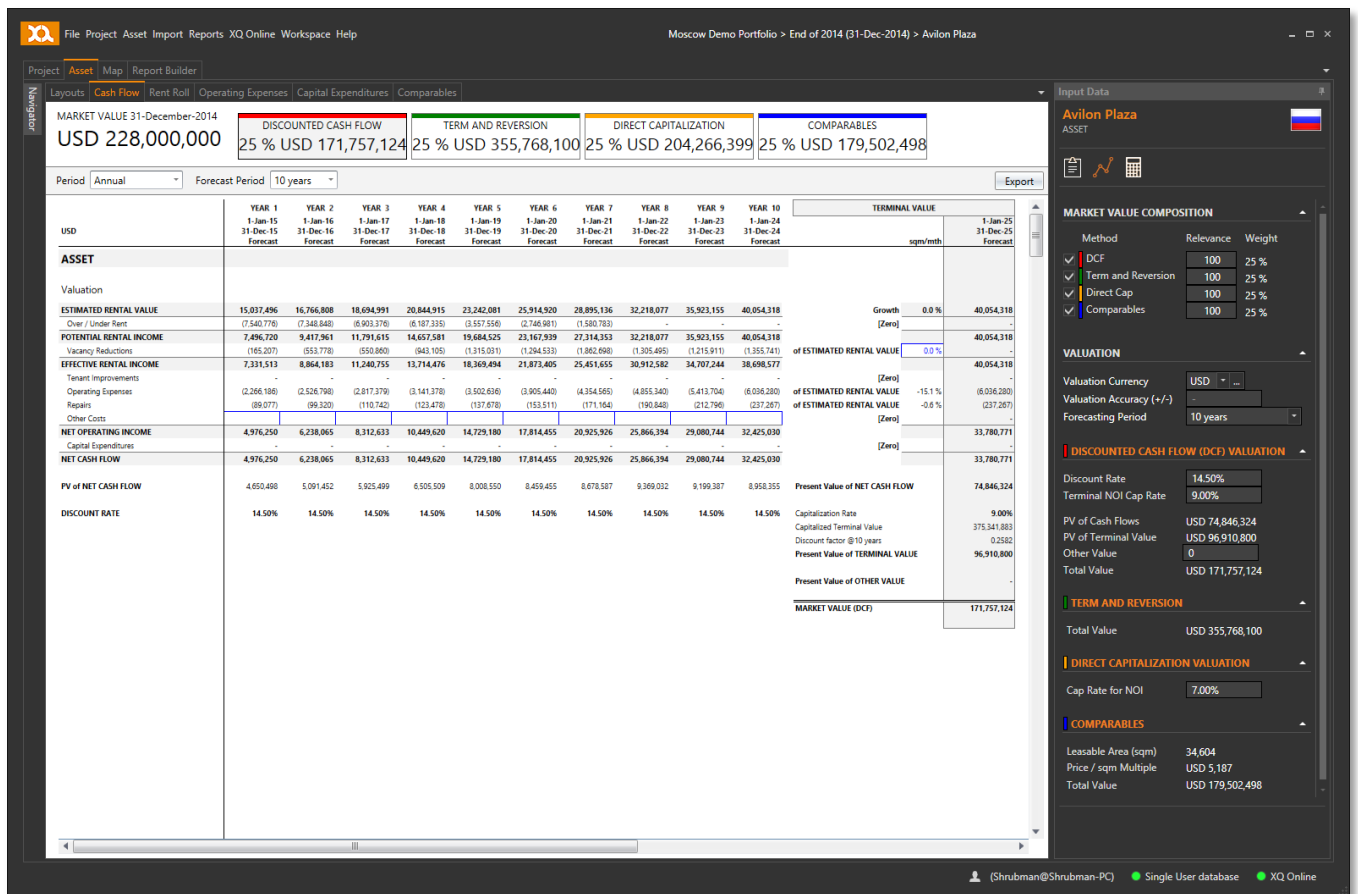
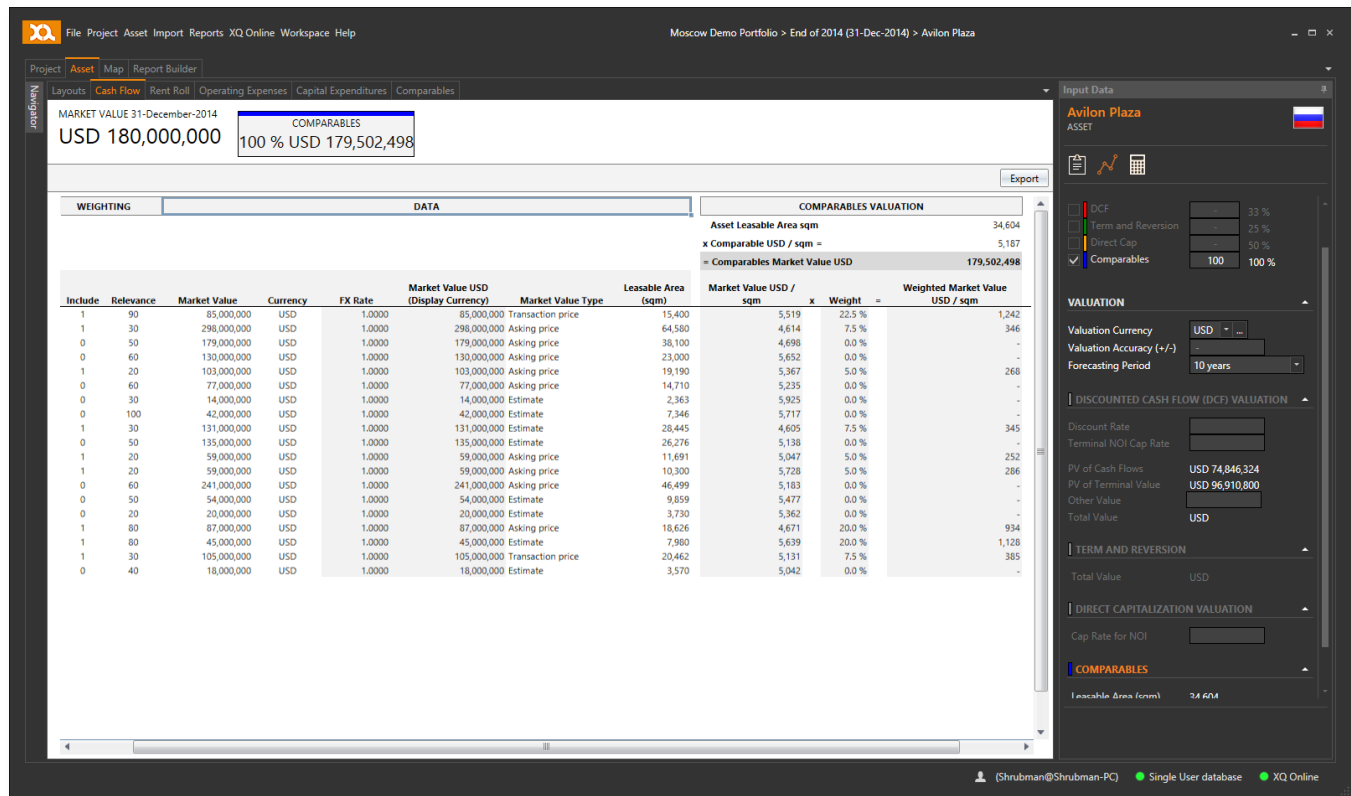# Term and reversion

[This section is being updated]
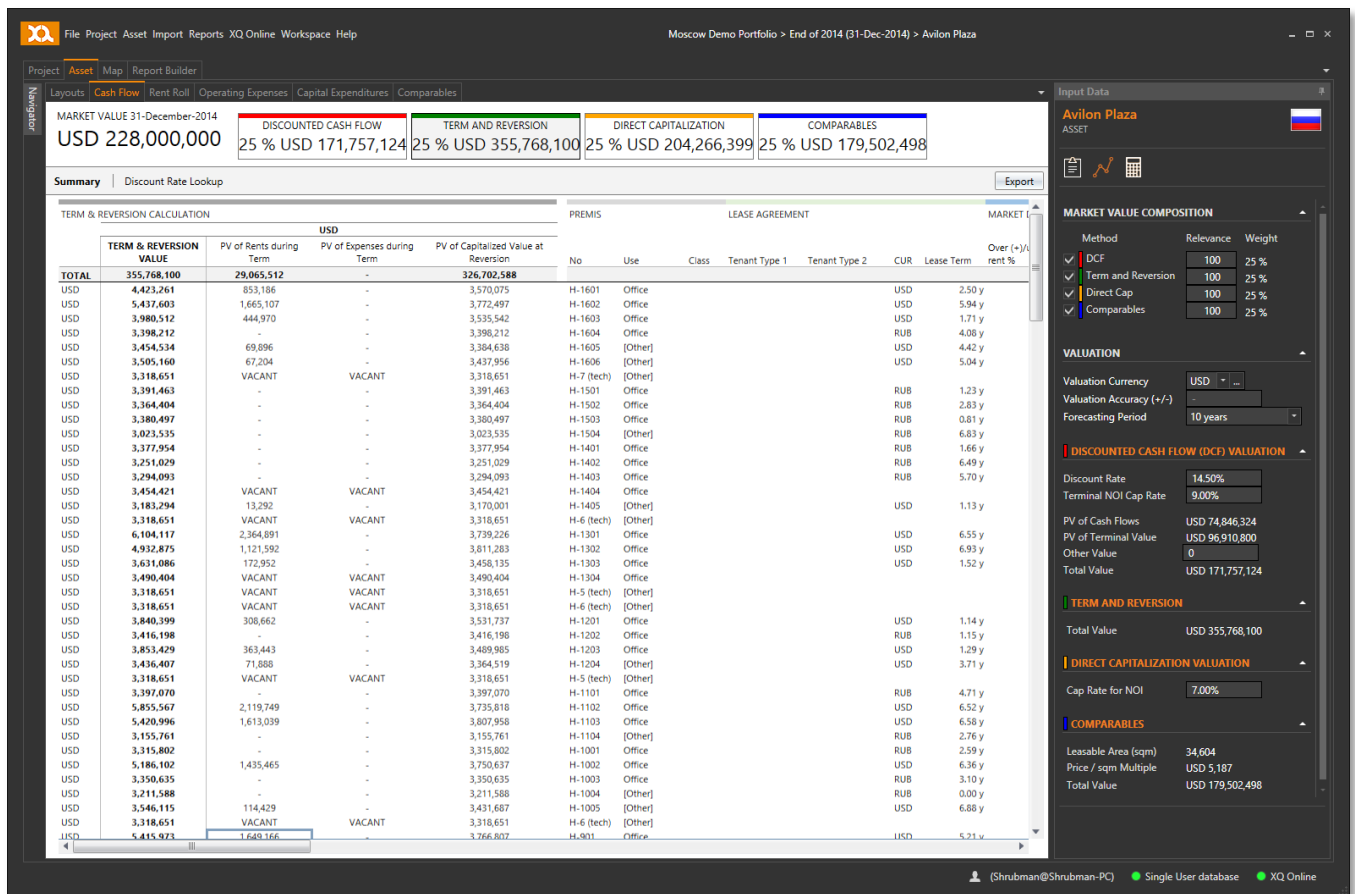
Direct capitalization

[This section is being updated]

Comparable assets

[This section is being updated]

Cash flow forecast

[This section is being updated]

USD	YEAR 1											
	1-Jan-15 31-Jan-15 Forecast	1-Feb-15 28-Feb-15 Forecast	1-Mar-15 31-Mar-15 Forecast	1-Apr-15 30-Apr-15 Forecast	1-May-15 31-May-15 Forecast	1-Jun-15 30-Jun-15 Forecast	1-Jul-15 31-Jul-15 Forecast	1-Aug-15 31-Aug-15 Forecast	1-Sep-15 30-Sep-15 Forecast	1-Oct-15 31-Oct-15 Forecast	1-Nov-15 30-Nov-15 Forecast	1-Dec-15 31-Dec-15 Forecast
ESTIMATED RENTAL VALUE	1,191,554	1,202,412	1,213,369	1,224,426	1,235,583	1,246,842	1,258,204	1,269,670	1,281,239	1,292,915	1,304,696	1,316,585
Over / Under Rent	(584,098)	(594,602)	(605,202)	(615,898)	(626,692)	(637,584)	(620,822)	(631,914)	(642,298)	(651,525)	(659,350)	(670,793)
POTENTIAL RENTAL INCOME	607,456	607,810	608,167	608,528	608,892	609,259	637,382	637,756	638,941	641,390	645,346	645,793
Vacancy Reductions	(38,853)	(39,207)	(33,670)	(29,349)	(5,001)	(1,685)	(1,701)	(1,716)	(2,540)	(4,624)	(3,415)	(3,446)
EFFECTIVE RENTAL INCOME	568,603	568,603	574,498	579,179	603,890	607,574	635,681	636,040	636,401	636,766	641,931	642,346
Tenant Improvements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	(179,570)	(181,206)	(182,858)	(184,524)	(186,205)	(187,902)	(189,614)	(191,342)	(193,086)	(194,845)	(196,621)	(198,413)
Repairs	(7,058)	(7,123)	(7,188)	(7,253)	(7,319)	(7,386)	(7,453)	(7,521)	(7,590)	(7,659)	(7,729)	(7,799)
Other Costs												
NET OPERATING INCOME	381,975	380,274	384,453	387,402	410,366	412,286	438,614	437,177	435,726	434,262	437,582	436,135
Capital Expenditures	-	-	-	-	-	-	-	-	-	-	-	-
NET CASH FLOW	381,975	380,274	384,453	387,402	410,366	412,286	438,614	437,177	435,726	434,262	437,582	436,135

Cash flow template

[This section is being updated]

Standards and consistency
[This section is being updated]

Cash flow items
[This section is being updated]

Cash Flow Template Editor

Template Name: General

Standard: Default standard

Cash Flow Items | Expense Items

Add | Break | Delete | Up | Down

No	Item name	Row Logic	DCF Terminal...	Key Figure	Valuatation...	Comment
0	ESTIMATED RENTAL VALUE	Auto - Estimated Rental Value	None	☐	○	
1	Over - Under Rent	Auto - Over/Under Rent	Ratio to	☐	○	
2	POTENTIAL RENTAL INCOME	Sum of (ESTIMATED RENTAL VALUE)	Post-growth	☐	○	
3	Vacancy Reductions	Auto - Vacancy Reduction		☐	○	
4	EFFECTIVE RENTAL INCOME	Sum of (POTENTIAL RENTAL INCOME, Vacancy Reductions)	Post-growth	☐	○	
7	Tenant Improvements	Auto - Tenant Improvement Costs	Ratio to	☐	○	
5	Operating Expenses	Auto - Operating Expenses	Average	☐	○	
6	Repairs	Auto - Operating Expenses	Average	☐	○	
8	Other Costs	Cell formula	Ratio to	☐	○	
9	NET OPERATING INCOME	Sum of (EFFECTIVE RENTAL INCOME, Tenant Improvements, Operating Exper	Post-growth	☐	○	
10	Capital Expenditures	Auto - Capital Expenditures	Ratio to	☐	○	
11	NET CASH FLOW	Sum of (NET OPERATING INCOME, Capital Expenditures)	Post-growth	☐	⦿	

Ok | Cancel | Apply

Expense items

[This section is being updated]

Forecast calculation principles

[This section is being updated]

Forecast periodicity
[This section is being updated]

Value validity span
[This section is being updated]

Indexed values

[This section is being updated]

Row formulae

[This section is being updated]

Custom array

[This section is being updated]

Valuation model

Asset cash flows

[This section is being updated]

DCF valuation

[This section is being updated]

Direct capitalization valuation

[This section is being updated]

Term and reversion valuation

[This section is being updated]

Premises cash flows

[This section is being updated]

Auxiliary time series

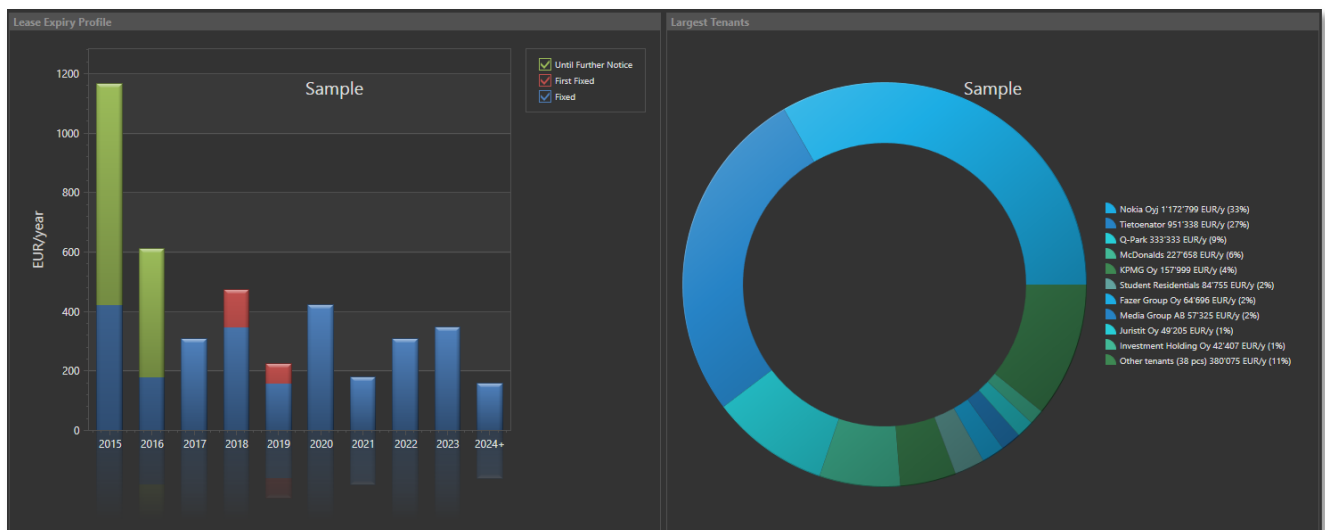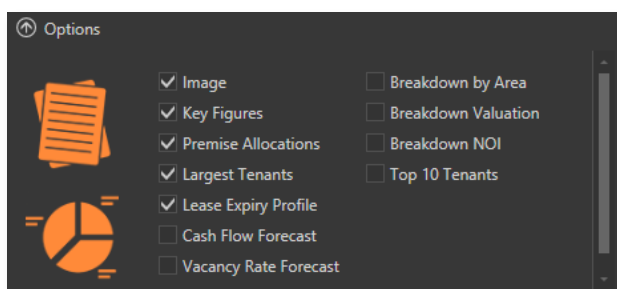[This section is being updated]

Output and reporting

Dashboards

[This section is being updated]

Project dashboard

[This section is being updated]

Asset dashboard

Asset dashboard contains major output items (e.g. name, location, key figures, charts, image, etc.)
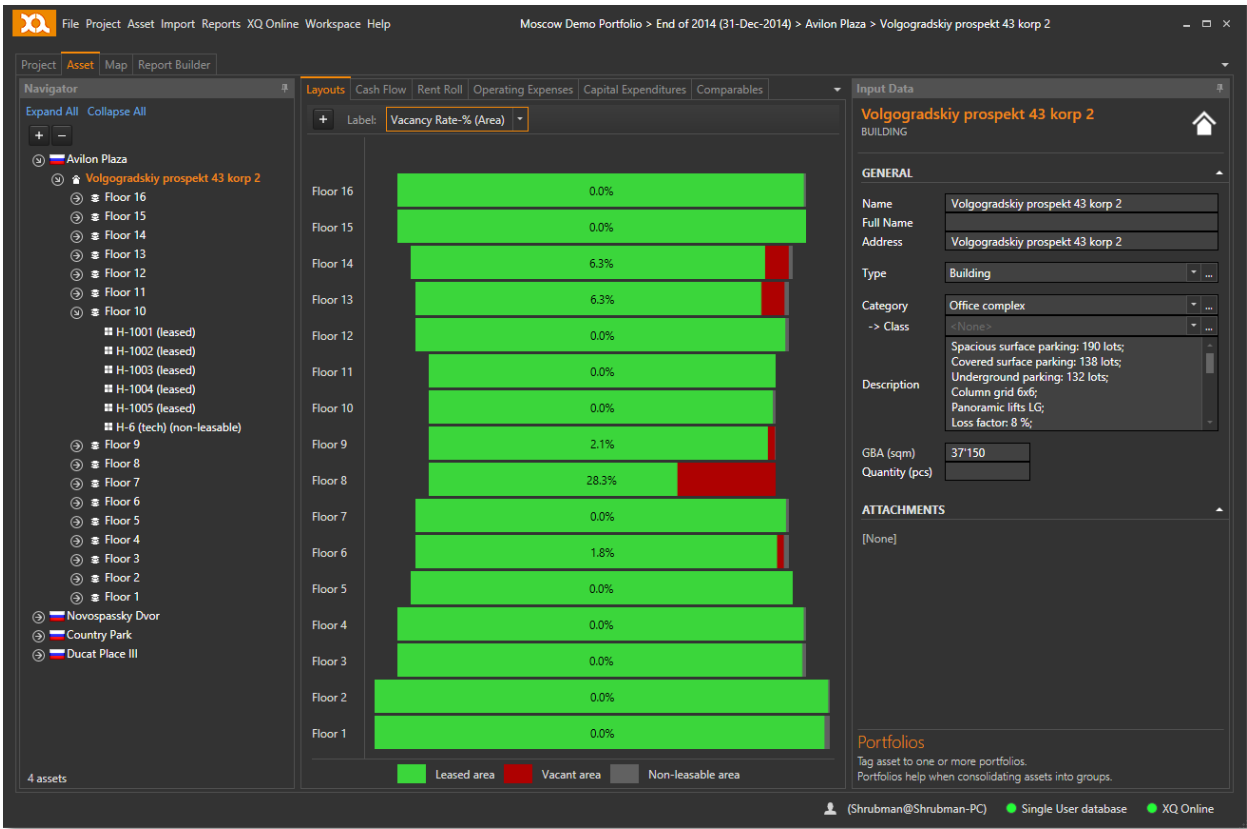
[This section is being updated]

Layouts

[This section is being updated]

Property layout

[This section is being updated]

Floor plans

[This section is being updated]

Export to Excel

[This section is being updated]

Table export

[This section is being updated]
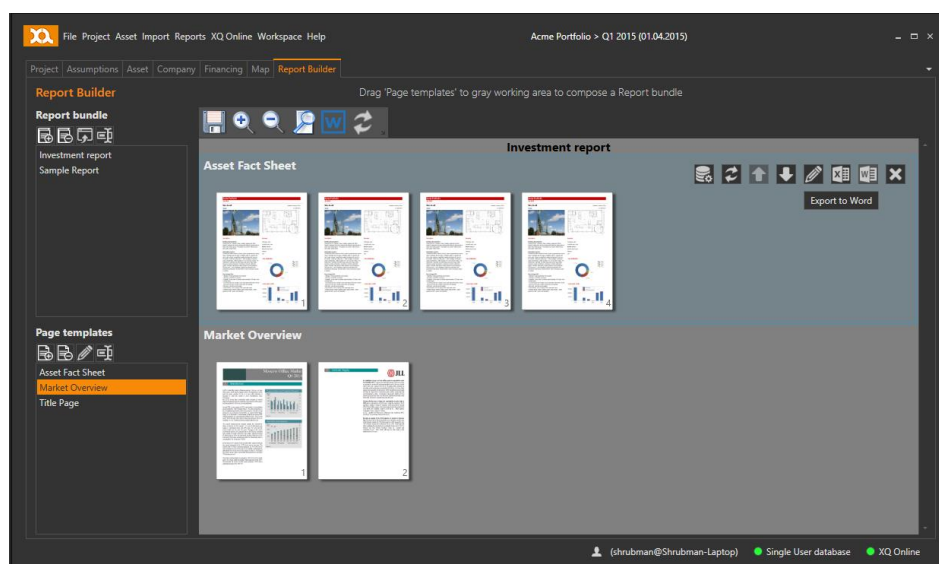
Valuation model export

[This section is being updated]

Report builder

[This section is being updated]

Composite reports

The report bundles (XQ report bundles files with XQR extension) can be saved and shared with other users for repetitive use. This way users can fill the same reports with up-to-date values from the database, at any time, with any frequency.

Report template design

The application features a built-in Report Builder, an application to design repetitive reports and use the application data to fill it with content. Users can create any page markup (XQ report templates files with XQT extension) and insert data links. The layouts of custom design automatically fill with relevant data from the analysis. Users can insert images, maps, charts, tables, and text to follow the corporate JLL's design guidelines.
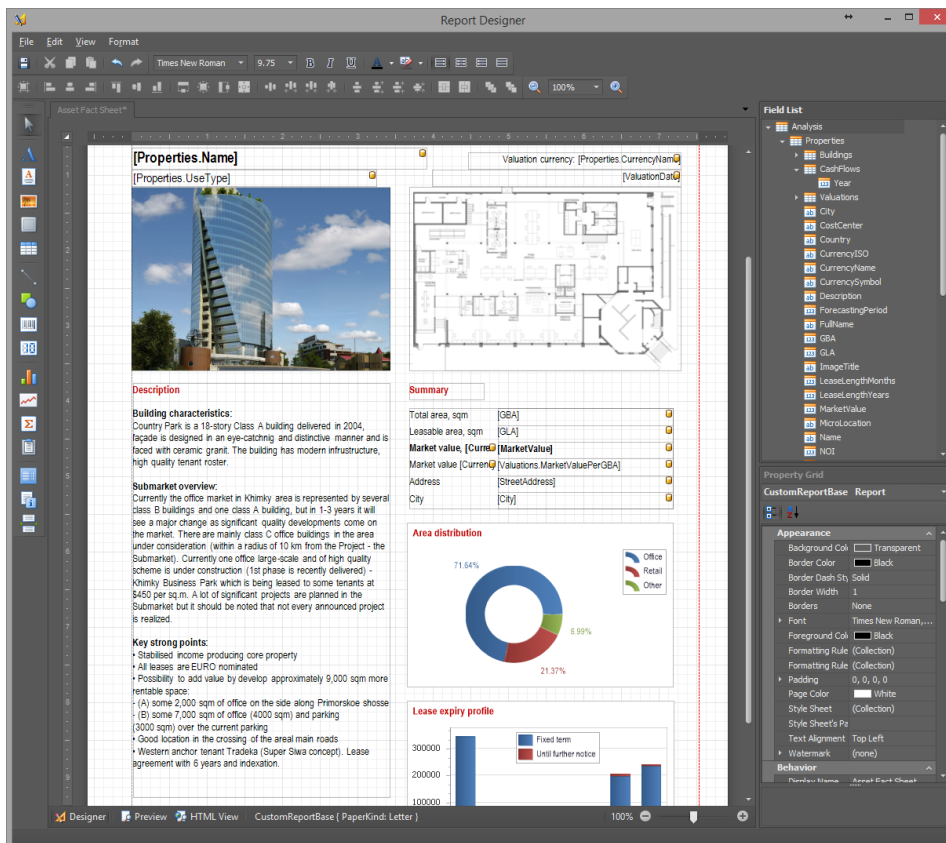
Whether the user is making property fact sheets, investment performance reports, or detailed investment memorandums to industry standards, they can arrange and combine any number of the templates into a bundle report which is auto-generated by a single click.

Analysis-to-analysis comparison

[This section is being updated]

Interactive reports online

[This section is being updated]

Terms

■ Glossary

[This section is being updated]

■ Alphabetical index

[This section is being updated]

For more information please visit:

Online XQ Guides & Manuals