# IBM OpenPages with Watson
# Version 8.1.0

## *Solutions Guide*

# Note

Before using this information and the product it supports, read the information in “Notices” on page 93.

**Product Information**

This document applies to IBM OpenPages with Watson Version 8.1.0 and may also apply to subsequent releases.

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# Introduction

IBM® OpenPages® with Watson™ contains solutions such as IBM OpenPages Financial Controls Management and IBM OpenPages Operational Risk Management.

### Audience

The *IBM OpenPages with Watson Solutions Guide* is intended for users who need to use the solutions that are provided with OpenPages with Watson. The content describes the object types for each solution. It also identifies subcomponents, computed fields, helpers, notifications, reports, triggers, profiles, role templates, views, and workflows that are supported by each solution.

### Please read the following important information regarding IBM OpenPages with Watson documentation

IBM maintains one set of documentation serving both cloud and on-premise IBM OpenPages with Watson deployments. The IBM OpenPages with Watson documentation describes certain features and functions which may not be available on the cloud. For example, IBM OpenPages with Watson on Cloud does not include integration with IBM Business Process Manager and certain administrative functions.

If you have any questions about the functionality available in the product version that you are using, please contact IBM OpenPages Support via the IBM Support Community.

### Finding information

To find product documentation on the web, including all translated documentation, access IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

### Accessibility features

Accessibility features help users who have a physical disability, such as restricted mobility or limited vision, to use information technology products. OpenPages with Watson documentation has accessibility features. PDF documents are supplemental and include no added accessibility features.

### Forward-looking statements

This documentation describes the current functionality of the product. References to items that are not currently available may be included. No implication of any future availability should be inferred. Any such references are not a commitment, promise, or legal obligation to deliver any material, code, or functionality. The development, release, and timing of features or functionality remain at the sole discretion of IBM.

## Object type licensing

You are licensed to use the object types for each IBM OpenPages with Watson solution that you have purchased.

For a full list of object types provided with each solution, see Chapter 2, “Object types,” on page 9. Use of any other object types is prohibited without prior written approval from IBM.

## OpenPages Financial Controls Management

IBM OpenPages Financial Controls Management reduces the time and resource costs that are associated with ongoing compliance for financial reporting regulations.

IBM OpenPages Financial Controls Management combines powerful document and process management with rich interactive reporting capabilities in a flexible, adaptable easy-to-use environment. This feature provides CEOs, CFOs, managers, independent auditors, and audit committees the ability to perform all activities for complying with financial reporting regulations in a simple and efficient manner.

It allows users to easily see the status of their financial controls documentation project, and provides a secure repository for the storage of their internal controls documentation.

Key features include:

- A Financial Controls Management Repository, which logically presents processes, risks and controls in many-to-many and shared relationships at multiple levels, and enables file attachment capability and action plans for processes, risks, controls, and tests at all levels.
- Flexible automation, which provides notification and completion of financial controls management activities, such as design review, operating review, and certification.
- Reporting, monitoring, and analytics.

## OpenPages Model Risk Governance

IBM OpenPages Model Risk Governance supports organizations in organizing and centralizing their Model Inventory.

As a solution IBM OpenPages Model Risk Governance provides a configurable and customizable platform, allowing firms to:

- Organize, document, and maintain an enterprise-wide inventory of models and their usages
- Document and track issues that are associated with models in a central location
- Record Model Change management governance activities
- Schedule, track, and manage Model Reviews and Validations
- Conduct periodic model attestations and model risk assessments
- Assign appropriate roles and responsibilities for model ownership and model risk management
- Monitor performance and status of their Model Risk Management program
- View the relationships between their Model Inventory and the relevant aspects of their Policy and Compliance obligations

## OpenPages Operational Risk Management

IBM OpenPages Operational Risk Management combines document and process management with a monitoring and decision support system. IBM OpenPages Operational Risk Management enables organizations to analyze, manage, and mitigate risk in a simple and efficient manner.

IBM OpenPages Operational Risk Management helps automate the process of measuring and monitoring operational risk. It combines all risk data, including risk and control self assessments, loss events, scenario analysis, external losses, and key risk indicators (KRI), into a single integrated solution.

IBM OpenPages Operational Risk Management includes the following key features:

- Loss Events to track, assess, and manage internal and external events that might result in operational loss.
- Risk and Control Self Assessments (RCSA) to identify, measure, and mitigate risk.
- Key Risk Indicators (KRIs) and Key Performance Indicators (KPIs), which can track performance metrics to potentially show the presence or state of a risk condition or trend.
- Scenario Analysis, which is an assessment technique that is used to identify and measure specific kinds of risks, in particular, low frequency, high-severity events.

- External Loss Events to import loss data from IBM FIRST Risk Case Studies, ORX, and ORIC loss databases
- Issue Management and Remediation (IMR)
- Capital Modeling, which provides the ability to store capital modeling information in OpenPages.
- Reporting, monitoring, and analytics

### IBM FIRST Risk Case Studies

The IBM FIRST Risk Case Studies database is a collection of external, public operational risk loss events in the form of risk case studies.

IBM FIRST Risk Case Studies events are targeted at the financial sector and contain over 20 years of events, which have been indexed to 13 keyword hierarchies, including Basel category and business line. Other hierarchies include control factor, event trigger, business unit type, and entity type. IBM FIRST Risk Case Studies cases include detailed descriptions that break down the event to analyze root cause, identify control breakdowns, lessons learned, management response and aftermath of the event. Events can also include sections with supporting detail that provide a timeline for the event, relevant information about the institution that it happened to, or other detail about loss impacts.

Most events in IBM FIRST Risk Case Studies capture quantitative information as well as detailed qualitative analysis. This quantitative information takes the form of loss amounts that are captured at the time of the event.

IBM FIRST Risk Case Studies offers a subscription to a data add-on refreshed daily with the IBM FIRST Risk Case Studies database in a format that is compatible with the FastMap feature.IBM OpenPages with Watson customers can use the IBM FIRST Risk Case Studies FastMap data add-on to provide end users with access to IBM FIRST Risk Case Studies case studies within the OpenPages with Watson application. After the data is loaded into OpenPages with Watson, end users can browse and associate IBM FIRST Risk Case Studies case studies to objects like Scenario Analyses, Risks, and Loss Events. Consult your IBM account representative for details on obtaining the IBM FIRST Risk Case Studies data add-on for OpenPages with Watson.

If you subscribe to the IBM FIRST Risk Case Studies database service, IBM FIRST Risk Case Studies provides a compatible FastMap file for a seamless load of IBM FIRST Risk Case Studies data to IBM OpenPages Operational Risk Management.

By default, IBM OpenPages Operational Risk Management includes the OpenPages FIRST Loss profile. Users with this profile can load FIRST Loss data through the IBM OpenPages FastMap feature. For more information about this profile, see “OpenPages FIRST Loss profile” on page 78.

## OpenPages Policy Management

IBM OpenPages Policy Management is an enterprise compliance management software solution that reduces the cost, complexity, and cumbersome nature of compliance with multiple regulatory mandates and corporate policies.

IBM OpenPages Policy Management allows companies to manage and monitor compliance activities through a full set of integrated functionality including:

- Regulatory Libraries and Change Management
- Risk and Control Assessments
- Policy Management, including Policy Creation, Review & Approval and Policy Awareness
- Control Testing and Issue Remediation
- Regulator Interaction Management
- Incident Tracking
- Key Performance Indicators
- Reporting, monitoring, and analytics

Within IBM OpenPages Policy Management, IBM OpenPages with Watson supports three approaches:

**Datacentric**
Policy attributes are stored as metadata in the Policy object. Policy and Procedure content is created, stored, edited, and reviewed in Policy Viewers. Red-lined track changes within draft iterations are not supported.

**Docucentric**
Policy attributes are stored as metadata in the Policy object. Policy and Procedure content is created outside of OpenPages with Watson and the entire document is attached to the Policy Object. Policy and Procedure content is never imported nor stored in OpenPages with Watson.

**Hybrid**
Policy attributes are stored as metadata in the Policy object. Policy and Procedure content is created and edited in Microsoft Word documents then imported and stored in OpenPages with Watson. The Track Changes functionality available in Microsoft Word is used for tracking red-line changes within draft iterations.

## OpenPages IT Governance

IBM OpenPages IT Governance aligns IT services, risks, and policies with corporate business initiatives, strategy, and operational standards.

IBM OpenPages IT Governance allows you to manage internal IT control and risk according to the business processes they support. In addition, it unites multiple silos of IT risk and compliance to deliver improved visibility, better decision support, and ultimately enhanced corporate performance.

Key features include:

- IT Regulatory and Policy Compliance
- Risk and Control Assessments
- Control Testing and Issue Remediation
- IT Resource Management
- Incident tracking
- Vulnerability tracking and scoring
- Key Performance and Key Risk Indicators
- Reporting, monitoring, and analytics

## OpenPages Internal Audit Management

IBM OpenPages Internal Audit Management provides internal auditors with a uniquely configured view into organizational governance, risk, and compliance (GRC), affording audit the chance to supplement and coexist with broader risk and compliance management activities.

IBM OpenPages Internal Audit Management is completely integrated with financial controls management, IT governance, policy management efforts and operational risk management programs. The internal audit team has the capability to work as a fully integrated partner to business stakeholders, completely independently, or anywhere in between, as determined by the specific needs of the audit department or a particular audit being undertaken.

Key features include:

- The capability to risk rank the audit universe, configured according to your audit methodology
  - Powerful support for your risk assessment methodology.
  - Full reporting across the entire audit universe.
- The ability to define, plan, execute, and report on audits across your business

  - Track and manage audits, audit sections, workpapers, and audit resource requirements and allocations.
  - Automate operations through fully configurable reporting.
- The ability to provide independent assurance to the business or work as an integrated part of GRC efforts
  - Opine on management's GRC efforts independently.
  - Control access to confidential audits, fields, and audit-only views.

## Issue Management and Remediation

The Issue Management and Remediation (IMR) process is an essential component to any risk management program. A sound IMR framework provides awareness, validation, and transparency to the risk management program that it supports.

When successfully implemented, it provides high value with minimal overhead and serves as the underlying stimulus for the continuous improvement of a risk management program. An effective IMR framework effectively documents, monitors, remediates, and audits identified issues.

Issues are events that negatively affect the ability to accurately manage and report risk. The issues are identified against the documented IMR framework. Issues can be associated with objects within the framework and commonly have attributes, such as ownership, scheduling, or remediation status that identify the area of focus. An issue can be associated with multiple parents. For example, if an issue is discovered through a loss event, the issue can be associated with the loss event, the risk that occurred, and any failing controls that are documented.

The IMR process operates in the following key activities:

1. Issue Creation and Assignment
2. Action Creation and Assignment
3. Remediation Performance
4. Issue closedown
5. Reporting

### Issue Creation and Assignment

Issues arise as a result of various risk management activities, such as a loss event, KRI threshold breach, or control weakness identification. Throughout these activities, users can create an issue within IBM OpenPages with Watson.

When an issue is created in the Task Focused UI, the Issue review workflow starts automatically.

For more information, see “Issue review workflow” on page 86.

### Action Creation and Assignment

It is the responsibility of the issue owner to establish and record the appropriate actions to resolve the identified issue.

When an action is created in the Task Focused UI, the Action Item workflow starts automatically.

For more information, see “Action Item Approval workflow” on page 87.

The following data is captured on an action item: description, assignee, start date, due date, actual closure date, status (read-only) and comments.

Action assignees are notified that they must complete an action.

**Remediation Performance**

After being notified, the assignee completes the assigned action. Some actions can take time to complete, so the assignee adds comments to track progress.

When the action is complete, the assignee selects **Actions** > **Submit for Approval**.

**Issue Closedown**

The issue owner accesses a list of actions to approve for closure.

If the action is rejected and saved, the status reverts to open and the action returns to the action assignee. If the action is accepted for closure and saved, the action status changes to closed and the field **Closure date** is populated with the current date.

When actions are completed, the issue owner reviews the issue and updates the status to **Closed**.

**Reporting**

A selection of issue and action reports is available to all users. In addition, all email notifications are included in a consolidated issue and action bulletin to users, including the following information:

- Issues assigned to the recipient in the past X days.
- Actions assigned to recipient in the past X days.
- Issues due for closure in the next X days.
- Actions due for closure in the next X days.
- Overdue issues.
- Overdue actions.
- Actions awaiting closure approval.

## Key Risk Indicators and Key Performance Indicators (KRIs and KPIs)

Key Risk Indicators (KRIs) and Key Performance Indicators (KPis) are available to the following solutions: IBM OpenPages Operational Risk Management, and IBM OpenPages IT Governance.

The main stages within the Key Indicator life cycle are definition, value creation, value capture, and reporting. The following automation is provided in these stages for both KRIs and for KPIs in support of a metrics management program:

**Indicator Definition**
Indicators can be created from scratch or can be created based on standard indicators in an indicator library.

**Value Creation**
KRI and KPI Value objects are created automatically by the Value Creation utility, which is normally run on a scheduled basis. The value creation utility can be run by an administrator if the automatic scheduled job fails to run.

**Value Capture**
Notifications that a value needs to be entered are automatically sent to the value Collector of Active indicators which are close to their collection date, through Home Page filtered lists and email. When the value has been entered and saved, KRI or KPI triggers calculate Breach and other status values, persist them on the value and on the indicator, and send notifications to the Risk owner if the Breach Status moves from Green or Amber to Red.

**Indicator Reporting**
KRI and KPI dashboard reports display summary indicator information for the selected Business Entity and its descendants, with the ability to drill-through to detail and trend information for the indicator values.

## OpenPages Vendor Risk Management

IBM OpenPages Vendor Risk Management supports firms in assessing and analyzing risks that are associated with the vendors they do business with.

IBM OpenPages Vendor Risk Management brings transparency into operational and security activities for vendors and the subcontractors they hire. It provides a scalable way to manage third-party compliance and risk. Firms can use it to more clearly understand how individual vendors or engagements relate to business processes.

IBM OpenPages Vendor Risk Management allows firms to complete the following tasks:

- Create, maintain, and document all vendors and engagements
- Classify or "tier" vendors as low, medium, or high criticality
- Manage contracts with third-party vendors
- Understand how third-party engagements support your business
- Use standard risk assessments to identify and mitigate risk in a specific way for individual vendors
- Leverage the questionnaire assessment capability to conduct vendor or engagement tiering using information you gather with risk or compliance questionnaire assessments.
- Collect and store evidence in a central location
- Remediate and mitigate risks after they are identified
- Build key performance and key risk indicators
- Monitor and report risks on an ongoing basis

## OpenPages Regulatory Compliance Management

IBM OpenPages Regulatory Compliance Management supports organizations in breaking down regulations into a catalog of requirements, evaluating its impact to the business, and creating actionable tasks.

As a solution it allows firms to:

- Maintain a repository of regulations and requirements that they must comply with
- Identify and create a catalog of requirements that fulfill the regulations
- Map regulatory requirements to their internal control framework
- Create groupings of requirements into Compliance Themes
- Conduct assessments of regulatory requirements under Compliance Plans

### Thomson Reuters connector

IBM OpenPages Regulatory Compliance Management includes a connector for Thomson Reuters Regulatory Intelligence (TRRI).

The TRRI Regulatory Event object enables the direct ingestion of regulatory event feeds from Thomson Reuters into RCM, and the automated generation of workflows assigned to users based on supplied data points, as well as documents impacted by regulatory change. This helps to efficiently assign tasks to users to effectively respond to, and prepare for, regulatory change.

### Taxonomy mapping

Users can associate their own taxonomy to the Thomson Reuters taxonomy that is used for Regulatory Events.

Users can populate fields on a Regulatory Event record that are more consistent with other values that are used in IBM OpenPages with Watson. The converted data points are available for use in the same

way as existing data points on the Regulatory Event record, such as for setting conditions within the Rules Engine or in a workflow.

**TRRI Rules Engine**

The IBM OpenPages with Watson Rules Engine helps users to handle the daily influx of regulatory events, automatically route them to the right users in their organization, and start any necessary workflows.

The data from the Thomson Reuters Regulatory Intelligence (TRRI) feed is loaded into OpenPages, and then passes through the Rules Engine. One regulatory event can trigger multiple rules if more than one rule's conditions are met.

Users can access the Rules Engine via a link on the **TRRI Regulatory Events** page.

**Sample workflows**

IBM OpenPages with Watson includes sample example workflows for processing TRRI Regulatory Events. For more information, see the *IBM OpenPages with Watson Solutions Guide*.

**Out-of-the-box rules for TRRI Regulatory Event processing**

IBM OpenPages with Watson includes example rules for the incoming TRRI Regulatory Events. These rules can be modified to match an organization's methodology for processing alerts published by regulatory agencies.

For information about how to configure the Thomson Reuters connector, see the *IBM OpenPages with Watson Administrator's Guide*.

**Wolters Kluwer connector**

IBM OpenPages Regulatory Compliance Management includes a connector for Wolters Kluwer (WK).

The WK Regulatory Event object enables the direct ingestion of regulatory event feeds from Wolters Kluwer into RCM, and the automated generation of workflows assigned to users based on supplied data points, as well as documents impacted by regulatory change. This helps to efficiently assign tasks to users to effectively respond to, and prepare for, regulatory change.

**Taxonomy mapping**

Users can associate their own taxonomy to the Wolters Kluwer taxonomy that is used for Regulatory Events.

Users can populate fields on a Regulatory Event record that are more consistent with other values that are used in IBM OpenPages with Watson. The converted data points are available for use in the same way as existing data points on the Regulatory Event record, such as for setting conditions within the Rules Engine or in a workflow.

**WK Rules Engine**

The Rules Engine helps users to handle the daily influx of regulatory events, automatically route them to the right users in their organization, and start any necessary workflows.

The data from Wolters Kluwer is loaded into OpenPages, and then passes through the Rules Engine. One regulatory event can trigger multiple rules if more than one rule's conditions are met.

Users can access the Rules Engine via a link on the **WK Regulatory Events** page.

**Sample workflows**

IBM OpenPages with Watson includes sample example workflows for processing WK Regulatory Events. For more information, see the *IBM OpenPages with Watson Solutions Guide*.

**Out-of-the-box rules for WK Regulatory Event processing**

IBM OpenPages with Watson includes example rules for the incoming WK Regulatory Events. These rules can be modified to match an organization's methodology for processing alerts published by regulatory agencies.

For information about how to configure the Wolters Kluwer connector, see the *IBM OpenPages with Watson Administrator's Guide*.

# Chapter 1. What's new?

New features are available for this release of IBM OpenPages with Watson solutions.

For information about all new features for this release, see the *IBM OpenPages with Watson New Features Guide*.

## New features in version 8.1.0.1

The new features in IBM OpenPages with Watson version 8.1.0.1 are described in the following sections.

**Solution enhancements**

*Table 1. Solution enhancements*

| For information about... | See topic... |
|---|---|
| IBM OpenPages Regulatory Compliance Management was significantly enhanced and improved.<br>• Added an object type, WK Regulatory Event, for Wolters Kluwer<br>• Added sample workflows for Wolters Kluwer<br>• Added out-of-the-box rules for Wolters Kluwer<br>• Added two new notifications:<br>– A notification for errors during an Wolters Kluwer import<br>– A notification for changes to Mandates, Sub-Mandates, and Requirements as a result of a TRRI or Wolters Kluwer import<br>• In the Rules Engine, you can create a rule by copying an existing rule. | "OpenPages Regulatory Compliance Management" on page xvii |
| IBM OpenPages Policy Management has a new registry setting: **Included Object Paths**, which specifies the object paths to include in the Policy helpers | Go to the **Settings** page and then go to **Solutions** > **PCM** > **Policy Creator** > **Shared** > **Included Object Paths** |

## New features in version 8.1.0

The new features in IBM OpenPages with Watson version 8.1.0 are described in the following sections.

**Solution enhancements**

*Table 2. Solution enhancements*

| For information about... | See topic... |
|---|---|
| IBM OpenPages Model Risk Governance was significantly enhanced and improved. Added new object types:<br>• Model Attestation<br>• Model Scorecard<br>Added a trigger on the Model Scorecard object.<br>Deprecated the following object types:<br>• Documentation<br>• Model Report<br>• Report Section<br>Added new profiles:<br>• MRG Model Owner<br>• MRG Model Validation<br>Added new role templates:<br>• MRG - Model Developer Owner<br>• MRG - Model Risk Management<br>• MRG - Model Validation<br>Added new system task views in the Task Focused UI.<br>Added new sample workflows in the Task Focused UI. | "Object type descriptions" on page 14<br>"Model Scorecard triggers" on page 73<br>New profiles:<br>• "OpenPages MRG Model Risk Management" on page 76<br>• "OpenPages MRG Model Developer Owner" on page 76<br>• "OpenPages MRG Model Validation" on page 76<br>"List of role templates" on page 81<br>"List of sample workflows in GRC Workflow" on page 85 |
| IBM OpenPages Regulatory Compliance Management was significantly enhanced and improved.<br>Added new object types:<br>• TRRI Regulatory Event<br>• TRRI Regulatory Event Series<br>Added new sample workflows.<br>Added a rules engine and out-of-the-box rules. | "OpenPages Regulatory Compliance Management" on page xvii |
| In IBM OpenPages Internal Audit Management, added new fields to auditable entities to support enhancements to periodic risk assessments. | |

| *Table 2. Solution enhancements (continued)* | |
|---|---|
| **For information about...** | **See topic...** |
| In IBM OpenPages Internal Audit Management, the legacy Timesheet Entry Report helper and Administrator Timesheet Entry Report helper were deprecated. They were replaced by the Timesheet Entry Helper and Timesheet Approval Helper that were introduced in 8.0.0.2. | |
| For all solutions, added reports for questionnaires:<br>• Program Report<br>• Single Assessment Report | "Questionnaire reports" on page 60 |
| In IBM OpenPages Operational Risk Management:<br>• Added the new Action Item Approval workflow.<br>• Moved functionality that was in the issue lifecycle trigger to the Issue Review workflow.<br>• Deprecated the issue review, issue lifecycle triggers, and action item lifecycle trigger.<br>• Added the Exchange Rate trigger for loss events. | "List of sample workflows in GRC Workflow" on page 85<br>"Exchange Rate trigger" on page 73 |
| Version numbers were removed from names of profiles. For example, a profile that was named `OpenPages RCM 7.3.0. Master` in previous releases is now named `OpenPages RCM Master`. Go to **Administration** > **Profiles** to view profiles. | Chapter 8, "Profiles," on page 75 |

## New features in version 8.0.0.2

The new features in IBM OpenPages with Watson version 8.0.0.2 are described in the following sections.

### Solution enhancements

| *Table 3. Solution enhancements* | |
|---|---|
| **For information about...** | **See topic...** |
| The new Timesheet Entry Helper for the IBM OpenPages Internal Audit Management solution | "Timesheet Entry Helper" on page 42 |
| The new Timesheet Approval Helper for the IBM OpenPages Internal Audit Management solution | "Timesheet Approval Helper" on page 42 |
| The new timesheet rejection notification | Chapter 5, "Notifications," on page 45 |
| The new GRC Workflow feature | *Configuring GRC Workflow* in the *IBM OpenPages with Watson Administrator's Guide* |
| The new example workflows for the Finding, Issue, Loss Event, and Workpaper object types | *Example Workflows* in the *IBM OpenPages with Watson Administrator's Guide* |
| The updated grid views and task views in the Task Focused UI for object types in the FCM, RCM, and IAM solutions | *Views in the Task Focused UI* in the *IBM OpenPages with Watson Administrator's Guide* |

## New features in version 7.4.0

The new features in IBM OpenPages with Watson version 7.4.0 are described in the following sections.

### Solutions enhancements

*Table 4. Solutions enhancements*

| For information about... | See topic... |
|---|---|
| The new Vulnerabilities object. | "Object type descriptions" on page 14 |

## New features in version 7.3.0

New solutions and solution enhancements are included in version 7.3.0 of IBM OpenPages with Watson solutions.

### IBM OpenPages Vendor Risk Management

The new IBM OpenPages Vendor Risk Management (VRM) solution supports firms in assessing and analyzing risks that are associated with the vendors they do business with. Added three new object types: Vendors, Engagements, Contracts. For more information, see "Object type descriptions" on page 14. Questionnaire assessments have been expanded to apply to Vendors and Engagements.

### IBM OpenPages Operational Risk Management

The IBM OpenPages Operational Risk Management (ORM) solution has been enhanced with improvements to Scenario Analysis. For more information, see "Object type descriptions" on page 14.

## New features in version 7.2.0.1

New solutions and solution enhancements are included in version 7.2.0.1 of IBM OpenPages with Watson solutions.

### New configurable lifecycles

In OpenPages version 7.2.0.1, three new lifecycles are added to the product, in addition to the existing questionnaire and incident lifecycles. These lifecycles are:

- Issues
- Controls
- Loss events

Lifecycles can continue to be extended to other objects as required. The lifecycles for issues and loss events are integrated with the existing triggers defined on those objects. The emails that are sent as part of the new lifecycles (including incidents) are improved, and contain more information about the resource. Issues and loss events have also been updated to include a due date for any requests made through the lifecycle.

For more information, see "New lifecycle triggers in version 7.2.0.1" on page 62.

## New features in version 7.2.0

New solutions and solution enhancements are included in version 7.2.0 of IBM OpenPages with Watson solutions.

### *Modules* are now called *Solutions*

The concept formerly known as *module* is now called *solution*. The title of this guide is now *IBM OpenPages GRC Platform Solutions Guide*.

### IBM OpenPages Regulatory Compliance Management

The IBM OpenPages Regulatory Compliance Management (RCM) solution supports organizations in breaking down regulations into a catalog of requirements, evaluating its impact on the business, and creating actionable tasks. As a solution, it allows firms to complete the following tasks:

- Create a catalog of requirements that fulfill regulatory obligations
- Compare the internal control environment to regulatory obligations
- Assess the level of compliance of internal controls against the regulatory requirements
- Initiate® remediation activities from the results of compliance assessments

Tables for the following items are updated to include new columns and rows related to RCM:

- Object types
- Subcomponents
- Object types that contain triggers
- Profiles
- Home page filtered lists
- Activity views
- Activity views to drive the Add New wizard

### IBM OpenPages Model Risk Governance

The IBM OpenPages Model Risk Governance (MRG) solution supports firms in organizing and centralizing their model inventory. As a solution, it provides a configurable and customizable platform, allowing firms to complete the following tasks:

- Organize and maintain the enterprise-wide list of models
- Document and track issues associated with models in a central location
- Record model change management governance activities
- Schedule, track, and manage model reviews and validations
- Assign appropriate roles and responsibilities for model ownership and model risk management
- Report on model inventory and model issues

Tables for the following items are updated to include new columns and rows related to MRG:

- Object types
- Subcomponents
- Notifications
- Reports
- Object types that contain triggers
- Profiles
- Home page filtered lists
- Activity views
- Activity views to drive the Add New wizard

### Questionnaire Assessments

The introduction of questionnaire assessments supports firms in collecting, organizing, and centralizing information that is gathered from business users. Lifecycle triggers support the questionnaire assessment review. The following objects were added:

- Questionnaire Assessments
- Questionnaire Templates
- Section Templates
- SubSection Templates
- Question Templates
- Programs

### Lifecycles on Incidents

The introduction of lifecycles on Incident objects supports firms in streamlining and standardizing how incidents are reviewed and investigated.

### Administrator Timesheet Entry Report helper

The section on the Administrator Timesheet Entry Report helper has been updated.

## New features in version 7.1.0

New features and enhancements are included in version 7.1.0 of IBM OpenPages with Watson modules.

### Integration with OpenPages Capital Modeling

IBM OpenPages Operational Risk Management is integrated with OpenPages Capital Modeling. The integration provides users with capital modeling capabilities and reports. Users can simultaneously collect, model, and report on operational risk data and capital. Users load data (internal and external loss data) from OpenPages with Watson into the Capital Modeling application. After the modeling process is complete, models are saved within the OpenPages application for further reporting and analysis.

The following object types are included:

- Capital Model
- Model Result

The following reports are included:

- Capital Contribution by Business Entity
- Capital Contribution by Risk Category

### Activity Views have been added for the Add New wizard

Add New activity views are included for the following object types:

- Risk
- Control
- Workpaper

## New features in version 7.0.0

New features and enhancements are included in version 7.0.0 of IBM OpenPages with Watson.

### Enriched Operational Risk Management functionality

New workflow, automation, and reports have been added to IBM OpenPages Operational Risk Management to provide standard approaches for the following practices:

- Loss Events
- Risk and Control Self Assessment
- Key Risk Indicators
- Key Performance Indicators
- Scenario Analysis
- External Loss Data Analysis
- Issue Management and Remediation

### Visualizations

As a Risk analyst or Compliance manager, you can graphically render your business process and communicate it to other users of risk analysis. You can create interactive visualizations to communicate information about the process flows and the Business Entity hierarchical structure.

The following object types are included:

- Process Diagram
- Data Input
- Data Output

# Chapter 2. Object types

IBM OpenPages with Watson solutions consist of various object types.

The *OpenPages Object Model Details* document provides information about the relationships between object types for each solution.

## Object name mapping

Default object type labels are mapped to object names.

*Table 5. Object type labels mapped to object names*

| Icon | Object name | Object type label |
|---|---|---|
|  | Assertion | Assertion |
|  | Attestation | Attestation |
|  | AuditableEntity | Auditable Entity |
|  | Auditor | Auditor |
|  | AuditPhase | Audit Section |
|  | AuditProgram | Audit |
|  | Campaign | Campaign |
|  | CapitalModel | Capital Model |
|  | CapitalModelResult | Capital Model Result |
|  | Challenge | Challenge |
|  | ChangeRequest | Change Request |
|  | Committee | Committee |
|  | CompliancePlan | Compliance Plan |
|  | ComplianceTheme | Compliance Theme |
|  | Contract | Contract |
|  | CostCenter | Cost Center |
|  | CtlEval | Control Eval |

| Table 5. Object type labels mapped to object names (continued) | | |
|---|---|---|
| **Icon** | **Object name** | **Object type label** |
|  | DataInput | Data Input |
|  | DataOutput | Data Output |
|  | Employee | Employee |
|  | Engagement | Engagement |
|  | Finding | Finding |
|  | FIRSTLoss | FIRST Loss |
|  | Incident | Incident |
|  | KeyPerfIndicator | KPI |
|  | KeyPerfIndicatorValue | KPI Value |
|  | KeyRiskIndicator | KRI |
|  | KeyRiskIndicatorValue | KRI Value |
|  | LossEvent | Loss Event |
|  | LossImpact | Loss Impact |
|  | LossRecovery | Loss Recovery |
|  | Mandate | Mandate |
|  | Metric | Metric |
|  | MetricValue | Metric Value |
|  | Model | Model |
|  | ModelAttestation | Model Attestation |
|  | ModelInput | Model Input |
|  | ModelLink | Model Link |
|  | ModelOutput | Model Output |

| Table 5. Object type labels mapped to object names (continued) | | |
|---|---|---|
| **Icon** | **Object name** | **Object type label** |
|  | Model Result | Model Result |
|  | ModelScorecard | Model Scorecard |
|  | ORICLoss | ORIC Loss |
|  | ORXLoss | ORX Loss |
|  | Plan | Plan |
|  | Policy | Policy |
|  | PolicyReviewComment | Policy Review Comment |
|  | Preference | Preference |
|  | PrefGrp | Preference Group |
|  | Procedure | Procedure |
|  | ProcessDiagram | Process Diagram |
|  | ProcessEval | Process Eval |
|  | Program | Program |
|  | Project | Project |
|  | ProjectActionItem | Milestone Action Item |
|  | Qsection | Section |
|  | Quest | Question |
|  | Questionnaire | Questionnaire |
|  | QuestionnaireAssessment | Questionnaire Assessment |
|  | QuestionnaireTemplate | Questionnaire Template |
|  | QuestionTemplate | Question Template |
|  | RAEval | Risk Assessment Eval |
|  | RegApp | Regulation Applicability |

| Table 5. Object type labels mapped to object names (continued) | | |
|---|---|---|
| **Icon** | **Object name** | **Object type label** |
|  | RegChange | Regulatory Change |
|  | RegInt | Regulator Interaction |
|  | Register | Register |
|  | RegTask | Regulatory Task |
|  | Regulator | Regulator |
|  | RegulatoryInitiative | Regulatory Initiative |
|  | Requirement | Requirement |
|  | RequirementEvaluation | Requirement Evaluation |
|  | RequirementEvaluationValue | Requirement Evaluation Value |
|  | Resource | Resource |
|  | ResourceLink | Resource Link |
|  | Review | Review |
|  | ReviewComment | Audit Review Comment |
|  | RICat | RI Category |
|  | RIReq | RI Request |
|  | RiskAssessment | Risk Assessment |
|  | RiskEntity | Control Plan |
|  | RiskEval | Risk Eval |
|  | RiskSubEntity | Baseline |
|  | ScenarioAnalysis | Scenario Analysis |
|  | ScenarioResult | Scenario Result |
|  | SectionTemplate | Section Template |

| Table 5. Object type labels mapped to object names (continued) | | |
|---|---|---|
| **Icon** | **Object name** | **Object type label** |
|  | SOXAccount | Account |
|  | SOXBusEntity | Business Entity |
|  | SOXControl | Control |
|  | SOXControlObjective | Control Objective |
|  | SOXDocument | File |
|  | SOXExternalDocument | Link |
|  | SOXIssue | Issue |
|  | SOXMilestone | Milestone |
|  | SOXProcess | Process |
|  | SOXRisk | Risk |
|  | SOXSignature | Signature |
|  | SOXSubaccount | Sub-Account |
|  | SOXSubprocess | Sub-Process |
|  | SOXTask | Action Item |
|  | SOXTest | Test Plan |
|  | SOXTestResult | Test Result |
|  | Submandate | Sub-Mandate |
|  | SubSectionTemplate | Subsection Template |
|  | Timesheet | Timesheet |
|  | TRRIRegEvent | TRRI Regulatory Event |
|  | TRRIRegSeries | TRRI Regulatory Event Series |
|  | Usage | Usage |

| Table 5. Object type labels mapped to object names (continued) | | |
|---|---|---|
| **Icon** | **Object name** | **Object type label** |
|  | Vendor | Vendor |
|  | Vulnerability | Vulnerability |
|  | Waiver | Waiver |
|  | WKRegEvent | WK Regulatory Event |
|  | Workpaper | Workpaper |

## Object type descriptions

IBM OpenPages with Watson solutions consist of various object types.

**Account**

Accounts correspond to one or more line items on a financial report. Each account is affected by recurring Processes. These Processes can introduce Risks that must be documented during the financial controls documentation project. An account is identified as significant based on factors such as size, complexity of the processes that operate on the account, or if the account is associated with new product lines within the business. The risks that might materialize and have material effect on the account are identified by consideration of the processes that operate on the account.

**Assertion**

The Assertion object is used to link Control objects to Account (or Sub-Account) objects. A common practice is to store the type of assertion that the Control is covering as a data field on the Assertion object.

**Attestation**

The Attestation object, part of the Policy Awareness capability, is used to capture an employee affirmation that they have read and understood a policy. An Attestation's primary parent is the Employee record and the secondary parent is the associated Campaign.

**Audit**

An Audit represents each execution of an audit against an Auditable Entity. For example, if an Auditable Entity is audited every two years, a separate child Audit instance must be created for each two-year period, such as 2006 and 2008. An organization might audit various processes. For example, you might audit an entity, a specific regulatory requirement, or a data center physical security.

The Audit object is configured as a self-contained object type and a folder is automatically created for each Audit instance. With this configuration, you can copy template audits and audit components from a library to the audit hierarchy without object naming conflicts.

Planning and scheduling of the Audit resources is done at the Audit level.

High-level Audit progress can be tracked by monitoring the Status values and Date values on the Audit. Key audit milestones can be tracked by adding fields that represent completion dates for each of the key milestones to track.

Use the Audit object to manage the audit process across your enterprise. The Audit identifies a holding point to capture information such as scope, objectives, timing information, review, execution, and approval roles. You can track a subset of audits that you are undertaking in a planning horizon, or all audits in the audit universe.

**Audit Review Comment**

The Audit Review Comment object type is used to provide feedback during the review process for an Audit and its components. It is associated as a child to the instance of the Audit, Section, Workpaper, or Finding for which feedback is being provided.

**Audit Section**

Audit Sections can be used to represent the phases of the Audit, work programs within the Audit, or other components of the Audit at the level of granularity you want.

Organizations might have multiple standard components for each Audit. Template audits that include sections for each standard component can be created in a library. Planned and Actual Start and End Dates for these sections are used to report progress on key milestones in the audits.

Detailed Audit progress can be tracked by including an Audit Section for each milestone. Alternatively, some organizations might add fields on the Audit that represent completion dates for each of the key milestones they want to track.

Although Audit Sections can be used for planning and scheduling Audit resources, most organizations find this method to be too detailed.

**Auditable Entity**

An Auditable Entity object is a child of a Business Entity. An Internal Audit Business Entity hierarchy is established and all Auditable Entities are created as a child of the Internal Audit Business Entity object. Auditable Entities that are aligned with elements of the Business Entity Organizational Hierarchy are also associated to those Business Entities.

An Auditable Entity represents a single element of the Audit Universe; the collection of things in the business that might be audited. Most Auditable Entities represent business or legal entities, but they can also represent processes, long-running projects or initiatives, compliance programs, or shared IT Services.

Auditable Entities are risk ranked every year to determine the priority of performing an audit that year. A Weighted Risk Score is calculated but the score can be overridden.

**Auditor**

Resource planning and allocating requires key information about each individual who might perform audit work. The Auditor object is used to create a pool of Auditors who can be assigned to Audits.

Each user who is assigned to audit work is represented as an Auditor instance. Auditors are then available for resource allocation. The Auditor object includes attributes to use to evaluate and select Auditors for audit engagements, such as specialties, languages, and certifications. Auditor objects are associated with the relevant component of the Internal Audit organizational hierarchy. As a best practice, match the Name on the Auditor object with the username.

**Baseline**

A Baseline object type represents a template of library requirements. It is self-contained, which means folders are created for each Baseline. Baselines in the Library represent elements of the IT operating environment. They are linked to Requirements for that type of element. The Baseline object is copied from the library to the business hierarchy, an association is made to a Requirement in the library, and Risk, Control, and Test object types are created as child objects. The Risk, Control, and Test objects are populated with data from the Requirement.

For example, a Baseline object can represent a collection of Requirement objects for a data center with Personally Identifiable Information (PII) and a Confidential Data classification. For each Requirement object, set up a best practice to define what to control (Risk object) and how to control it (Control object). You can also establish a practice for verifying the effectiveness of the Control (Test object).

**Business Entity**

Business entities are abstract representations of your business structure. A business entity can contain subentities (such as departments, business units, or geographic locations). The entity structure that you create depends on your business needs. For example, you might create a parent entity for your business headquarters and a subentity for each location or department. You might also want to represent both a legal entity structure and a business entity structure.

Business entities are also used to organize library data such as risk and control libraries, or regulatory content (for example, laws, regulations, and standards).

When you set up your business entity hierarchy, work with your IBM OpenPages consultant. The structure of your business entities impacts the type and quality of information that can be extracted from the application.

In IBM OpenPages Internal Audit Management, Business Entities also model the Internal Audit organizational structure, which facilitates reporting and security for the Internal Audit team. The Internal Audit organizational structure is a top-level entity to minimize the chance of accidentally granting a business user access to Internal Audit information. The elements of the Audit Universe that are owned by an Internal Audit team are associated with the team Business Entity. Another top-level Business Entity structure can be created to organize confidential Audits, providing special security to these Audits. Business Entity can also be used to organize a Library of template audit content.

**Campaign**

The Campaign object is part of the Policy Awareness capability and is used to manage the project management aspects of an awareness campaign. It is also used to define the requirements and criteria that identify which employees need to read and attest to each Policy. Campaigns are typically created in the Published Policy Hierarchy.

**Capital Model**

The Capital Model object is used to store operational risk capital modeling results derived by using the advanced measurement approach (AMA).

**Capital Model Result**

The Capital Model Result object displays the final operational risk capital estimates.

**Challenge**

The Challenge object can be used to store and evidence the presence of a Challenge to any part of the Model Inventory. A Challenge is raised and the response recorded. The Challenge object is a child of the Model and Usage objects.

**Change Request**

The Change Request object is a child of the Model and Usage objects and allows for the creation and tracking of governance activities related to changes in Models and their deployments. The object captures data such as Change Type, Change Description and Status as well as allowing for the recording of the key Approval and governance steps in the change request lifecycle.

**Committee**

The Committee object is a child of the Business Entity and allows an organization to represent governance groups/committees. These can then be aligned to Models and can also be a parent of the Employee object. It can store information such as the Terms of Reference for a committee, frequency of meetings, and detail of the Chairperson.

**Compliance Plan**

Compliance Plans allow for the creation of an overall plan to address regulatory requirements in a structured setting, or to structure a set of regulatory tasks. For example, a Compliance Plan might be created to track regulatory tasks, or to conduct compliance assessments against various regulatory requirements. One or multiple Compliance Themes can be grouped into an overall Compliance Plan for the organization.

**Compliance Theme**

Compliance Themes allow users to organize regulatory requirements into themes for assessment purposes. This allows for assessing compliance requirements beyond the typical business entity approach, by grouping regulatory requirements across themes that impact across the organization. Sample themes may include data privacy, governance, accountability, etc. This allows users to assess the impact of regulations not just within business entities, but across themes that touch on multiple areas of the organization.

**Contract**

Contract objects are child objects of Vendor or Engagement objects. A Contract represents a business or legal agreement between a Business Entity and a Vendor or Engagement. A Contract contains

additional, supporting information, for example, the timeframe of the contract or monetary information. Contracts are optional.

**Control**

Controls are policies and procedures that make sure that risk mitigation responses are performed.

After you identify the risks that occur in your practices, establish controls, such as approvals, authorizations, and verifications. These controls remove, limit, or transfer these risks.

Controls provide either prevention or detection of risks. Controls are associated with tests that ensure that a control is effective. For example, the human resources department identifies a risk in the new hire process. The process does not comply with regulations and guidelines for diversity and discrimination. Define controls to mitigate this risk, such as, establish hiring policies and procedures, and conduct mandatory training for hiring managers.

In IBM OpenPages Internal Audit Management, use Controls to create a detailed model of the Controls that exist or that you want to enforce on the activities that are audited. If shared with the Business, the Controls can be rated separately by Internal Audit and by the Business.

**Control Eval**

Control Eval objects are similar to Risk Evaluation objects except that they are created as children of Controls. They store control assessment data. When report periods and control assessment evaluation cycles are not aligned, use Control Eval objects to capture multiple evaluation cycles within a single reporting period.

**Control Objective**

A Control Objective is an assessment object that defines the risk categories for a Process or Sub-Process.

Control Objectives define the COSO compliance categories that the Controls are intended to mitigate. Control Objectives can be classified into categories such as Compliance, Financial Reporting, Strategic, Operations, or Unknown.

After a Control Objective is identified, the Risks belonging to that Control Objective can then be defined. In most cases, each Control Objective has one Risk that is associated with it. However, it might have more than one Risk that is associated with it. For example, a financial services company employs traders that are aware of the required ethical standards. The HR department sets up a control objective called 'Personnel'. A risk that is associated with the Control Objective is, "Employees engage in business dealings that conflict with the company objectives for ethical and fair trading."

By default, an OpenPages Internal Audit Management Control Objective is disabled. This object is not often used, except to align with other solutions that might use it.

**Control Plan**

Control Plan is a self-contained object type, which means that folders are created for each Control Plan. It groups multiple Baselines to represent elements in the operating environment that can be assessed for risk. It acts as a container for a collection of Baseline objects that together perform a function or comprise an IT service. For example, a Control Plan object might represent the servers, operating systems, applications, databases, support personnel, and facilities that provide the corporate email.

**Cost Center**

Cost Center objects are used to group loss events under a business entity. In many cases, firms want to track where loss events occur at a fine granularity, such as cost center level, but do not want to represent all of the organizational layers as business entities.

**Data Input, Data Output**

The Data Input Object and Data Output Object are child objects of the Process and can have associations only to existing Risks. They represent elements of a flow to depict an Input into the Business Flow or an Output from various activities within a process, such as running a report or updating a CRM system or getting an external data source feed.

**Employee**

The Employee object is part of the Policy Awareness Capability. It is used to capture information about individual employees such as the name, title, email, region, department, or status. Information

from the employee profile is then matched against the Attestation Requirements that are defined on a Campaign to determine which Employees need to attest to each Policy. Employee data is typically derived from an HR system export, loaded via Online FastMap, and resides in the reference Employee Business Entity. It is a best practice that the Employee Name field matches the user's username.

**Engagement**

Engagement objects are child objects of Vendor objects. An Engagement represents a single service that is provided by a Vendor. You use them to differentiate between various services and agreements you have with a Vendor. Engagements are optional. They can be subject to questionnaire assessments, risk assessments, or tiering. You can summarize and analyze risk that is associated with different Engagements. You can add a parent association to the process or sub-process that an Engagement supports.

**File**

The File object type is used to embed a reference to a file (such as a document, flow chart or spreadsheet) in the IBM OpenPages system, and associate it to one or more relevant objects.

**Finding**

Findings can be used to represent observations that are reportable to the business, to the Audit Committee, or both. Alternatively, Findings can be used to represent individual factual observations, while Issues are used to represent consolidated themes and systemic problems, which are then reported to the business, to the Audit Committee, or both.

A Finding represents anything that is uncovered in the course of an audit that needs to be accounted for and addressed by management. You can use a finding to track management's progress in addressing the underlying issue identified. The Issue object can be used in place of, or in conjunction with, the Finding object.

**FIRST Loss**

FIRST Loss objects can be imported from the FIRST external loss database, for use with scenario analysis, benchmarking, and reports generation, and to export loss data to analytic tools or capital allocation applications. FIRST Loss objects are often organized by loss categories, such as product lines or event types. For example, use a Business Entity to create a hierarchy for FIRST loss data. Name the root object "FIRST-data", and create category folders under the root. Link external losses to it.

**Incident**

An incident is an occurrence that has a potentially adverse effect on your enterprise. Create an Incident object to record information, such as the person responsible for investigating the incident and other related data. The Incident object is used with lifecycles to facilitate incident analysis. Categories that apply to incidents include Regulatory Compliance, Legal Compliance, Information Security, and IT. Incidents are stored under the Business Entity or IT Resource where the event occurred and associated secondarily to an impacted Mandate or Policy.

**Issue, Action Item**

Although issues are generated in areas where internal controls are not properly implemented, use the Issue object to document a concern that is associated with any object type. For example, a Test is associated with a Control, but the Test failed the last time that it completed. This potential problem can be highlighted by capturing it in an Issue object.

An Issue is resolved through Action Items. You can use an Action Item or a series of related Action Items to form an Action Plan. Each Action Item is assigned to a user for resolution, and tracks progress. After all Action Items for an Issue are complete (when an assignee sets the value to 100%), close the Issue.

In OpenPages Internal Audit Management, Issues and Action Items can be used instead of, or with, Findings.

**KPI, KPI Value**

KPIs (Key Performance Indicators) are components of the risk monitoring process and are used to provide leading or lagging indicators for potential risk conditions. Each instance of a KPI within the organization can have unique target and threshold limits. The KPI Value object type records the value

of a KPI object at a specific point. Create a KPI object, and then periodically (daily, weekly, monthly) create a KPI Value object so you can detect trends.

**KRI, KRI Value**
KRIs (Key Risk Indicators) are components of the risk monitoring process and are used to provide leading or lagging indicators for potential risk conditions. Each instance of a KRI within the organization can have unique target and threshold limits. KRI values are used to record the actual value of an indicator at a specific point in time.

**Link**
The Link object type is used to embed a reference to a URL in the OpenPages system, and associate it to one or more relevant objects.

**Loss Event**
Loss Events are used to track operational losses that occur in any part of an organization. Loss Events are typically stored under the Business Entity where the loss occurred. The Loss Event objects are used to track, assess, and manage the related internal loss data. You can add multiple impacts and recoveries for each Loss Event by using the Loss Impact and Loss Recovery objects. Loss Event, Loss Impact, and Loss Recovery objects can also be created in IBM OpenPages Loss Event Entry.

**Loss Impact**
A loss impact is a financial and non-financial consequence that results from a loss event. Loss Impacts track different types of impacts that are triggered by a Loss Event, such as legal liability, asset loss and damage, or business interruption. Multiple Loss Impacts can be associated with each Loss Event.

**Loss Recovery**
Loss Recovery objects are used to track the processes that are associated with recouping damages that result from Loss Events.

**Mandate**
Mandates represent external items with which organizations need to comply, such as laws, regulations, and standards. Content can be pulled from UCF or other third party providers. Mandates are represented in a Library Business Entity structure, and are not replicated throughout the system. For example, an insurance company has a Mandate object for HIPAA and another Mandate object for GLBA. You can associate the same mandate with different groups within your organization. Privacy mandates, for example, might apply to payroll, insurance services, legal, and IT departments. Mandate also supports content for regulatory compliance.

**Metric, Metric Value**
The Metric object records the definition of a performance measurement that the organization chooses to track. A user sets the Metric Type, Yellow, and Red Thresholds and other collection information. A Metric is a child of Usage and Model objects.

The Metric Value object records the result of the metric performance measurement. It is designed to behave in a way to allow the organization to store time series results of measurement.

**Milestone, Milestone Action Item**
A Milestone represents a significant point in the development of your project. You can tie Milestones to specific dates, or use them to signify the completion of a portion of the entire project. Milestones can contain other Milestones or Milestone Action Items. You cannot associate a Milestone with other objects in the object hierarchy.

A Milestone Action Item is a specific objective that must be completed to reach a Milestone. In general, all Milestone Action Items that are associated with a Milestone must be completed to reach a Milestone. When you are assigned a Milestone Action Item object, it is displayed (if configured) in the My Milestone Action Items section of your My Work tab.

**Model**
The Model object provides representation of the Models within an organization. At a theoretical level a model as a quantitative method, system or approach that applies statistical, economic, financial or mathematical theories, techniques and assumptions to process input data into quantitative estimates. Within the Model object, key model information can be represented, including: Model Description, Model Ownership, Model Status, Development lifecycle dates, Model Type and Category,

and Model Risk Assessment data. A Model object is a child of a Business Entity and parent of Usage objects.

**Model Attestation**
Model Attestation allows an organization to request a regular sign off or *attestation* of a Model. The MRG administrator periodically creates a set of blank Model Attestations, which are assigned to the respective Model Owners. Each Model Owner answers a set of questions about the Model and submits their Model Attestation.

**Model Input**
If an organization wants to adopt a more granular approach to model documentation, the Model Input object provides the ability to record the inputs. Fields include Input Owner, Type, Status, and Description. A Model Input object can also be the child of a Model Output object, which allows for the creation of Model chains at a detail level if the Model Link approach is not granular enough.

**Model Link**
If an organization wants to adopt a less granular approach to Model documentation, use Model Link, which is a broad-type association that does not provide explicit details of the feed from one model to another. It acts as a child of multiple models to allow for the generation of Model chains.

**Model Output**
If an organization wants to adopt a more granular approach to Model documentation, the Model Output object provides the ability to record the Outputs of the Model. The intended purpose is to record the Description and Overview of the Output from a governance point of view and not to record the Model Result.

**Model Scorecard**
Model risk assessments are performed during the development and documentation phase of a Model. They are also typically performed periodically after a Model is in production. The Model Scorecard object is used to conduct this risk assessment. The user answers a number of questions about the Model. Model Scorecard triggers calculate a risk score and determine the Model tier.

**Model Result**
The Model Result object is the resulting operational risk capital estimate or the aggregate loss distribution that results from the simulation of the selected best fit frequency and severity distributions. Each Model Result is associated to a Capital Model object. For Single Models (Scenario Model, Internal Loss Model, FIRST Loss Model) Individual Value at Risk (VaR) capital is displayed at varying percentiles (the number and value of percentiles can be configured). For Independent and Correlated Models, capital is displayed for Individual VaR, Additive ESF (Expected Shortfall), and Additive VaR at varying percentiles (the number and value of percentiles can be configured).

**ORIC Loss**
ORIC Loss objects can be imported from the ORIC external loss database, for use with scenario analysis, benchmarking, and reports generation, and to export loss data to analytic tools or capital allocation applications.

**ORX Loss**
ORX Loss objects can be imported from the ORX external loss database, for use with scenario analysis, benchmarking, and reports generation, and to export loss data to analytic tools or capital allocation applications. You can import external ORX loss data into OpenPages Operational Risk Management for use with scenario analysis and capital modeling.

**Plan, Timesheet**
A Plan object type facilitates audit resource scheduling and allocation at any level. For example, you can create a single Plan object for an entire audit, or you can create one Plan object per task for each auditor who is involved with the audit. Plan objects are used to determine the availability, skills, and experience required of the desired resource. OpenPages Audit Activity Views, reports, and so on, are aligned with Planning at the Audit level. Plans can instead be associated to Audit Sections, in which case these components would need to be modified.

Plan objects also drive time tracking - all time is tracked against Plans. A Timesheet object type is used to record weekly actual hours and expenses that are expended against a Plan object for an Audit. Because Timesheet objects are associated with Plans, it is easy to track deviations between planned and actual time and expenses. The Timesheet Entry interactive report should always be used

to enter or modify time and expense data. For this reason, there is no Timesheet top menu item in the default OpenPages Internal Audit Management configuration.

You typically create or modify a Plan object by using the Add or Modify Plans helper, which you access from a link on the Audit detail page.

**Policy**

Policies represent internal guidelines that are adopted by the Board of Directors or senior governance body within an organization. The text of a Policy can either be stored in standardized fields on the object or as an attachment to the object. Policies typically have a distinct lifecycle from Draft to Published to Expired, as well as a review and approval process. Draft policies typically reside in the Organizational Business Hierarchy, while Published and Expired Policies typically reside in reference Library entities. Policies are also often mapped to applicable Mandates in the Library to which they relate.

**Policy Review Comment**

Policy Review Comments support and facilitate the review and approval process of Policies and Procedures by Subject Matter Experts and Compliance Personnel.

**Preference, Preference Group**

The Preference object is a child of a Business Entity or Preference Group, and includes variable values that can drive reports, workflows, and computed fields. It has entity-specific variable values that enable different behavior for the same workflows. For example, define variable values to determine the behavior for review and approval workflows such as the appropriate users for each level of review and approval, and the thresholds for determining how many levels of review and approval are required.

The Preference Group is used to group Preference objects together. Without this grouping object, each Preference object must be associated separately with each relevant Business Entities. The Preference Group helps minimize the associated maintenance.

In the default IBM OpenPages Internal Audit Management configuration, these objects are used to hold weights for Risk Factors used in Annual Assessment Risk Ranking. Since the weights and factors can be different for each type of audit, such as financial, operational, or strategic, create a separate Preference instance for each audit type. As a child of Business Entity, this approach provides the ability to have entity-specific variable values.

In the default IBM OpenPages Model Risk Governance configuration, these objects are used to identify participants in various MRG workflows and to configure parameters in the Model Scorecard configuration.

**Procedure**

Procedures represent the what, where, when, and how of how policies are implemented in an organization. The text of Procedures is typically stored in the fields on the object. Typically, Procedures are represented as children of a Policy and reside in the same entity structure as its parent Policy.

**Process**

Processes represent the major end-to-end business activities within a business entity that are subject to risk. Processes reside in areas such as financial reporting, compliance, and information security. For example, Processes in the Accounts Receivable department such as order-to-cash could be improved with controls to protect against financial reporting risks such as fraudulent behavior or financial reporting inaccuracies.

In OpenPages Internal Audit Management, Processes are also used in scoping audits. Audits can copy Processes that are created by the business entity, or create their own Processes.

**Process Diagram**

A Process Diagram is a child object of the Process and can have many diagrams per process. It is used to store the sequence of sub-processes or activities within a process with associated Risks and Controls along with any annotations such as decision nodes. All attributes of the Business Process visualization are stored in the Process Diagram object.

**Process Eval**

Process Evaluation objects are children of Process objects and they are used to capture process measurement values for trending purposes.

When the reporting periods do not align with the evaluation cycles, you can use Process Eval objects to capture multiple evaluation cycles within a single reporting period.

**Program**

Program objects are used together with Questionnaire Templates to implement Questionnaire Assessments. When a business administrator launches a Program, Questionnaires Assessments are created. A Program is associated with underlying assets, Questionnaire Assessments it created, and the Questionnaire Template it is based on. The Program defines the lifecycle that Questionnaire Assessments follow.

**Project**

A project is designed to organize regulatory tasks into an overall compliance project. For example, there may be regulatory changes that need to be addressed in the compliance framework; users can create a project to identify and assign tasks.

**Questionnaire, Section, Question**

Questionnaire, Section, and Question objects are used together to implement questionnaires. Questionnaires are created as templates in a library and gather information from respondents. Section objects are children of parent Questionnaire objects and organize sets of related questions. Question objects are children of Section objects and capture respondent data. Business administrators use the Questionnaire Set Up Activity View to configure questionnaire templates. Questionnaire templates are then copied to parent Business Entity, Process, Sub-Process, or Employee object types.

Questionnaires are not related to questionnaire assessments. Information that describes questionnaires does not apply to questionnaire assessments.

**Questionnaire Assessment**

Questionnaire Assessment objects are a means of gathering information from business users in the organization. Questionnaire Assessments are created when a Program is launched. Questionnaire Assessments are associated with underlying assets, the Program that launched it, and the Questionnaire Template it is based on. Questionnaire Assessments are used with lifecycles to facilitate a review process.

Questionnaires assessments are not related to questionnaires. Information that describes questionnaire assessments, questionnaire templates, and programs does not apply to questionnaires.

**Questionnaire Template, Section Template, SubSection Template, and Question Template**

Questionnaire Template, Section Template, SubSection Template, and Question Template objects are used together with Programs to implement Questionnaire Assessments. Questionnaire Template objects are parent objects and organize Section Template objects. Section Template objects are children of Questionnaire Template objects and organize SubSection Template objects. SubSection Template objects are children of parent Section Template objects and organize Question Template objects. Question Template objects contain questions and answer choices.

**Register**

The Register object is a child of Entity and a parent of the Model object. The usage of the Register object is optional. Its primary purpose is to act as a library of Models during development.

**Regulation Applicability**

The Regulation Applicability object resides in the organizational business hierarchy. It assesses and tracks the regulatory impact of a Mandate in the library on a Business Entity.

**Regulator**

The Regulator object is part of the Regulator Interaction Management capability and provides the ability for organizations to create a single inventory of all Regulators with which they interact. Regulators are typically created in a reference Library Business Entity. The object is a child of Business Entity and can be associated to Mandates and Regulator Interactions.

**Regulator Interaction**

The Regulator Interaction object is part of the Regulator Interaction Management capability and provides the ability to manage the interactions, communication, internal work, review, and approvals associated with external regulators such as inquiries, submissions, filings, exams, and audits. For complex interactions such as exams and audits, customers can use a three-tier object structure (Regulator Interaction, RI Category, and RI Request) to manage and track the overall interaction, each section of the interaction, and the individual requests. For simpler requests and inquiries, customers can use the Regulator Interaction object by itself to manage the request details and response details.

**Regulatory Change**

The Regulatory Change object is part of the Regulatory Change Management capability. It supports the ability to track regulatory changes (change or guidance to an existing regulation or a new regulatory requirement), assess the impact of a change on the organization, communicate the change internally to the appropriate people, and drive internal processes in response to the change. Regulatory Changes typically reside in the Library Business Entity, and are associated directly to the Mandate that changed. It then has multiple Regulatory Tasks associated to it; one for each Business Entity that is impacted by the respective Mandate.

**Regulatory Initiative**

The Regulatory Initiative object is a child of the Business Entity and captures descriptive information about regulations that impact an organization. Regulatory Initiatives represent a broader grouping of regulations. For example, Anti-Money Laundering could be a Regulatory Initiative that includes several different money laundering regulations that organizations must comply with.

**Regulatory Task**

The Regulatory Task object is part of the Regulatory Change Management capability. It facilitates the change management process that is associated with a Regulatory Change. A Regulatory Task is created in the Organizational Business Hierarchy and assigned to an individual in each of the Business Entities that is impacted by the Mandate that was changed. The object is then used to track and monitor if an action is required as a result of the change (such as revise policy, control assessment, training) and the progress of the action.

**Requirement**

The Requirement object details specific requirements, found in the related Mandate or Sub-Mandate object, that the organization needs to adhere to in order to be in compliance.

Content can be pulled from UCF or other third party providers. Typically, Requirements are represented in a Library Business Entity structure and are not replicated throughout the system.

**Requirement Evaluation**

Once users have mapped internal controls to requirements derived from regulations, users can conduct an evaluation of how well they are operating vis-à-vis the identified requirement. Users can evaluate the operating effectiveness and design effectiveness of controls in within the scope of a compliance theme.

**Requirement Evaluation Value**

Requirement Evaluation Values are used to record the actual value of requirement at a given point in time within the scope of a Requirement Evaluation.

**Resource**

COBIT suggests that there are four types of IT assets, while practitioners often include more types as well. The Resource object is sub-typed using dependent fields to represent any of these types of IT assets. Resources are typically created as a pool associated to the owning or responsible IT Business Entity, then associated to the relevant operating elements (Baselines, Processes, and so on) in the IT Operating Environment, and potentially associated to relevant Business Entities for the Business as well. Although Resources can represent individual IT Assets (for example, a particular Microsoft Windows 2003 server) they more often represent a group of assets (for example, a pool of Windows 2003 Application Servers used for a particular application).

**Resource Link**

COBIT suggests that IT assets have complicated relationships. They indicate that assets of type People, Process, Infrastructure, and Information can each be parents and can each be children of each other. In addition, Resources of the same type often need to be related to each other. A

Resource Link can be used to link Resources in a many-to-many fashion, but the practice (supported by the User Interface helper) is to link exactly two Resources. If the names or attributes of either of the parent resources are changed, the Resource Link name and attributes will be out of sync with its parent Resources.

**Review**

The Review object is used to record the scheduling and outcomes of any Model Review activity. It is the child of both the Usage and Model objects. The object is intended to capture the outcomes of Reviews whether they are pre-implementation, post-implementation, and performed by second or third line of defense.

**RI Category**

The RI Category object is part of the Regulator Interaction Management capability and is used as the middle tier of the three-tier object model (Regulator Interaction, RI Category, and RI Request). The object is used to organize and track the progress of individual sections or categories of a complex interaction such as an exam or audit.

**RI Request**

The RI Request object is part of the Regulator Interaction Management capability and is used as the last tier of the three-tier object model (Regulator Interaction, RI Category, and RI Request). The object is used to organize and track the individual requests, reviews, and approvals of pre-work and onsite tasks as part of a complex interaction such as an exam or audit.

**Risk**

Risks are potential liabilities. Risks can be associated with business processes, business entities, or a compliance with a mandate. Each risk has controls that provide safeguards against the risk. The controls help lessen consequences that result from the risk. Use the Risk object to categorize risks; capture the frequency, rating, and severity of observed and computed risk data; and view reports to identify top risk items. For example, the Cash account has a process that is called Payroll. A potential risk that might occur in the payroll is a duplicate payroll disbursements or the creation of fictitious payroll disbursements. Identifying risks in processes is a key component of developing a financial controls documentation project.

In OpenPages Internal Audit Management, a Risk that is shared between an internal audit and the business can be rated separately.

**Risk Assessment**

Risk assessments give you the ability to evaluate and report potential liabilities for a set of business entities or processes. A Risk Assessment object contains the names of the assessor and reviewer, the assessment time frames, and the status of the assessment. Use a Risk Assessment to manage the risk self-assessment process. Associate Risk objects with a Risk Assessment to create a link between the business entity and the Risks. For example, create a Risk Assessment to assess operational risks, such as external theft and fraud, internal fraud, physical property damage, or business disruption.

**Risk Assessment Eval**

Risk Assessment Evaluation objects are similar to Risk Evaluation objects except that they are instantiated as children of Risk Assessments. They store risk assessment data.

**Risk Eval**

Risk Evaluation objects are children of Risk objects and they are used to capture risk measurement values for trending purposes. Often reporting periods do not line up with risk evaluation cycles and so Risk Eval objects can be used to capture multiple evaluation cycles within a single reporting period.

**Scenario Analysis**

Scenario Analysis (SA) is an assessment technique that is used to identify and measure the potential occurrence of operational risk events. Unlike traditional operational risk assessments, it is a forward looking “what if” analysis.

Scenario Analysis is designed to derive reasoned assessments of the likelihood and impact of plausible operational losses from business and risk management experts. It is often used to identify and measure events with low frequency but high severity losses, for example, natural disasters, terrorism, and rogue traders. Along with its qualitative elements, it is often used as a direct input into a firm’s operational risk capital estimate. You can use the Scenario Analysis process in OpenPages to construct Scenario Analyses and collect supporting qualitative and quantitative data. Scenario

Analyses are typically created for Business Entities and assigned a Risk Category. You can also associate supporting ORM data, for example, risk assessments, relevant loss events, ORIC losses, ORX losses, and risks. Within each Scenario Analysis, you can record a range of frequency and severity estimates in "buckets" along with supporting information for the assessment. After the Scenario Analysis is complete, you can run the Scenario Analysis Completion Helper to finalize the assessment and create the Scenario Analysis Result object.

**Scenario Result**

Scenario Result objects are children of Scenario Analysis objects and they are used to capture the results of Scenario Analysis workshops for comparison and trending purposes.

**Signature**

A Signature generally indicates agreement that the object meets your approval. It has no enforcement powers, and does not prevent the item from being modified after approval has been given. An object with a Signature has a Signature icon next to the signer's name on the Signatures tab.

Signatures (with or without associated locks) are applied to an object from the detail page of an object.

If Signature locks are configured on your system, when you sign off on an object, the object and all its associated child objects are locked and cannot be modified until you either revoke your Signature or an administrator unlocks the object.

**Sub-Account**

A Sub-Account represents a smaller, more targeted line item that is part of a larger parent Account (or of another Sub-Account). Each Sub-Account object can be associated with parent Account or Sub-Account objects.

**Sub-Mandate**

Sub-Mandates represent external (or internal) sub-items with which the organization needs to comply. Content can be pulled from UCF or other third party providers. Typically, Sub-Mandates are represented in a Library Business Entity structure, and are not replicated throughout the system. Sub-Mandate is recursive, but Deloitte and UCF content use exactly one level of Sub-Mandate. Sub-Mandates also support content for regulatory compliance. Sub-mandates can be used to represent paragraphs that are derived from regulatory papers.

**Sub-Process**

A Sub-Process is a component of a Process. It is used to divide Processes into smaller units for assessment purposes. For example, an order-to-cash financial Process might be composed of several Sub-Processes such as accounts payable, purchasing, and general accounting. Any of these Sub-Processes might expose the Business Entity to risk and can be improved by using controls.

In OpenPages Internal Audit Management, this object is not used in audit scoping, but might be used in documenting Process details.

**Test Plan**

A Test Plan is a container for tests and can be associated with parent Control objects and child objects, such as Test Results and Issues. Determine the operating effectiveness of a Control by conducting detailed tests and then documenting the results. Test Plans describe the mechanisms that determine if a Control is effective. For example, a sample Control is: "Human Resources authorizes changes in employee status." A test for this control might be: "Verify HR authorization stamp on new employee records." The test verifies that the new Control is implemented and in use.

The default OpenPages Internal Audit Management configuration uses the Workpaper object in place of the Test Plan and Test Result. The Audit object needs access to these objects because they are often used to document business testing.

**Test Result**

A Test Result is the information that is obtained from running a test plan.

The default OpenPages Internal Audit Management configuration uses the Workpaper object in place of the Test Plan and Test Result. The Audit object needs access to these objects because they are often used to document business testing.

**TRRI Regulatory Event**
The TRRI Regulatory Event object enables the direct ingestion of regulatory event feeds from Thomson Reuters into IBM OpenPages Regulatory Compliance Management.

**TRRI Regulatory Event Series**
The TRRI Regulatory Event Series object is a collection of TRRI Regulatory Events that have been assigned the same Series ID within the TRRI feed. The grouping of TRRI Regulatory Events within the TRRI Regulatory Event Series allows changes to be tracked from proposed to final stage in the regulatory change evolution.

**Usage**
The Usage object is a child of Model. It is used as a key element of recording the deployment of one or more models.

**Vendor**
A Vendor represents a third-party company from which a firm procures goods or services. Vendors can have two types of child objects: Engagements and Contracts. Vendors can be subject to questionnaire assessments, risk assessments, or tiering. You can summarize and analyze risk associated with different Vendors. You can add a parent association to the process or sub-process that a Vendor supports.

**Vulnerability**
Vulnerabilities give you the ability to track and assess security weaknesses. You assign scores to Vulnerabilities using the Vulnerabilities Common Vulnerability Scoring System (CVSS v2). The parent object for a Vulnerability can be a Control Plan, Incident, Resource, or Risk. Typically, you import Vulnerabilities from an IT security solution.

**Waiver**
Waivers give you the ability to document, process and manage the lifecycle of exceptions to Corporate Policies, InfoSec Policies, IT Policies, or Regulatory Compliance Requirements. Waivers can be associated to Business Entities, Policies, Procedures, Requirements, Risks, Controls, Baselines, and Resources.

**WK Regulatory Event**
The WK Regulatory Event object enables the direct ingestion of regulatory event feeds from Wolters Kluwer into IBM OpenPages Regulatory Compliance Management.

**Workpaper**
A Workpaper is any artifact or deliverable you want to track in the scope of an audit. It can represent an engagement letter, a testing matrix, interview notes, or anything else appropriate to the audit in question. The workpaper itself can be attributes that are stored on the Workpaper object, or it can be a Microsoft Word, Microsoft Excel, or other type of file that is attached to a Workpaper object. When Workpaper is used for test evidence, it documents both the test planning and the test results.

Create a Workpaper object from the detail page of an Audit Section. Workpaper objects can also be copied from a library, where they represent templates of different types of workpapers that are generated by an internal audit department.

## Subcomponents

IBM OpenPages with Watson solutions consist of several subcomponents.

A subcomponent is a group of objects types that supports a logical function within the solution.

The following table lists the subcomponents that are included by default.

The following acronyms are used in the table:

- VRM = IBM OpenPages Vendor Risk Management
- RCM = IBM OpenPages Regulatory Compliance Management
- MRG = IBM OpenPages Model Risk Governance
- FCM = IBM OpenPages Financial Controls Management

- ORM = IBM OpenPages Operational Risk Management
- PCM = IBM OpenPages Policy Management
- ITG = IBM OpenPages IT Governance
- IAM = IBM OpenPages Internal Audit Management

*Table 6. Subcomponents in OpenPages with Watson*

| Subcomponent | Object type label | VRM | RCM | MRG | FCM | ORM | PCM | ITG | IAM |
|---|---|---|---|---|---|---|---|---|---|
| Organization | Business Entity | X | X | X | X | X | X | X | X |
| Preference | Preference Group, Preference | X | X | X | X | X | X | X | X |
| Risk Assessment | Risk Assessment, Risk Assessment Eval | X | X | X | X | X | X | X | X |
| Process | Process, Process Eval, Sub-Process, Control Objective | X | X | X | X | X | X | X | X |
| Risk | Risk, Risk Eval | X | X | X | X | X | X | X | X |
| Control | Control, Control Eval | X | X | X | X | X | X | X | X |
| Test | Test Plan, Test Result | X | X | X | X | X | X | X | X |
| Issue | Issue, Action Item | X | X | X | X | X | X | X | X |
| Questionnaire | Questionnaire, Section, Question, | | X | X | X | X | X | X | X |
| Questionnaire Assessment | Questionnaire Assessment, Questionnaire Template, Section Template, SubSection Template, Question Template | X | X | X | X | X | X | X | X |
| Milestone | Milestone, Milestone Action Item | X | X | X | X | X | X | X | X |
| Visualization | Process Diagram, Data Input, Data Output | X | X | X | X | X | X | X | X |
| Assessment Program | Program | X | X | X | X | X | X | X | X |
| Employee | Employee | X | X | X | X | X | X | X | X |
| Account | Account, Sub-Account, Assertion | | | | X | | | | |
| Scenario Analysis | Scenario Analysis, Scenario Result | | | | | X | | | |
| External Loss | ORX Loss, ORIC Loss, FIRST Loss | | | | | X | | | |

*Table 6. Subcomponents in OpenPages with Watson (continued)*

| Subcomponent | Object type label | VRM | RCM | MRG | FCM | ORM | PCM | ITG | IAM |
|---|---|---|---|---|---|---|---|---|---|
| Loss Event | Loss Event, Loss Impact, Loss Recovery, Cost Center | | | | | X | | | |
| Capital Modeling | Capital Model, Capital Model Result | | | | | X | | | |
| KRI | KRI, KRI Value | X | | | | X | X | X | |
| KPI | KPI, KPI Value | | | | | X | X | X | |
| Regulatory Library | Mandate, Sub-Mandate, Requirement | | X | X | | | X | X | |
| Regulatory Alert | TRRI Regulatory Event, TRRI Regulatory Event Series<br>WK Regulatory Event | | X | | | | | | |
| Incident | Incident | X | | | | | X | X | |
| Waiver | Waiver | X | | | | | X | X | |
| Policy | Policy, Procedure, Policy Review Comment | | X | X | | | X | | |
| Policy Attestation | Policy, Procedure, Attestation | | | | | | X | | |
| Campaign | Campaign, Employee, Attestation | | | | | | X | | |
| Regulator Interaction | Regulator Interaction, Regulator, RI Category, RI Request | | X | | | | X | | |
| Regulatory Change | Regulatory Change, Regulation Applicability, Regulatory Task | | X | | | | X | | |
| ITG Policy | Policy, Procedure | | | | | | | X | |
| Control Plan | Control Plan, Baseline | | | | | | | X | |
| Resource | Resource, Resource Link | | | | | | | X | |
| Annual Plan | Auditable Entity, Audit | | | | | | | | X |
| Engagement Plan | Plan, Timesheet, Auditor | | | | | | | | X |
| Findings | Finding | | | | | | | | X |

*Table 6. Subcomponents in OpenPages with Watson (continued)*

| Subcomponent | Object type label | VRM | RCM | MRG | FCM | ORM | PCM | ITG | IAM |
|---|---|---|---|---|---|---|---|---|---|
| Field Work | Audit Section, Workpaper, Audit Review Comment | | | | | | | | X |
| Compliance Project | Project, Compliance Plan, Compliance Theme | | X | | | | | | |
| Requirement Evaluation | Requirement Evaluation, Requirement Evaluation Value | | X | | | | | | |
| Regulator | Regulator, Regulatory Initiative | | X | | | | | | |
| Model Monitoring | Metric, Metric Value | | | X | | | | | |
| Committee Structure | Committee, Employee | | | X | | | | | |
| Model Inventory and Lifecycle | Register, Usage, Model, Change Request, Model Input, Model Output, Model Link, Model Attestation, Model Scorecard | | | X | | | | | |
| MRG Review and Challenge | Review, Challenge | | | X | | | | | |
| Vendor | Vendor, Engagement, Contract | X | | | | | | | |

In addition to the subcomponents listed in the table, the following object types are included in each solution and can be accessed by any authorized user:

- Signature
- File
- Link

# Chapter 3. Computed fields

IBM OpenPages with Watson solutions consist of several computed fields. A computed field is a read-only field whose value is derived from the values of other fields. Computed fields can contain data types such as Boolean, date, decimal, integer, and simple strings.

The following table lists the computed fields that are included for each solution by default.

The following acronyms are used in the table:

- RCM = IBM OpenPages Regulatory Compliance Management
- ORM = IBM OpenPages Operational Risk Management
- PCM = IBM OpenPages Policy Management
- ITG = IBM OpenPages IT Governance
- IAM = IBM OpenPages Internal Audit Management

*Table 7. Computed fields in OpenPages with Watson solutions*

| **Object type label**<br>**Field group**<br>**Field name** | **Description** | **RCM** | **ORM** | **PCM** | **ITG** | **IAM** |
|---|---|---|---|---|---|---|
| Risk Assessment<br>OPSS-RA<br>RCSA Completion Helper | Creates a link that launches the RCSA Completion helper. This helper allows the RCSA Coordinator to complete the Risk Assessment and create an evaluation tree for historical referencing. | | X | | | |
| Risk Assessment<br>OPSS-RA<br>RCSA Process Alignment Helper | Creates a link that launches the RCSA Process Alignment helper. This helper allows the RCSA Coordinator to review the associate Processes, Risks, and Controls, and create further associations. The helper also sets the Processes, Risks, and Controls to a status of Awaiting Assessment. | | X | | | |
| Scenario Analysis<br>Scenario Completion Helper | Creates a link that launches the Scenario Completion helper. This helper is used to create Scenario Results after completion of a workshop.<br>The Scenario Owner or Risk team can start the helper manually when scenario analysis is complete. | | X | | | |
| Attestation<br>OPSS-Attest<br>Policy Attestation | Creates a link that launches the Policy Awareness View helper. | | | X | | |

*Table 7. Computed fields in OpenPages with Watson solutions (continued)*

| **Object type label**<br>**Field group**<br>**Field name** | **Description** | **RCM** | **ORM** | **PCM** | **ITG** | **IAM** |
|---|---|---|---|---|---|---|
| Policy<br>OPSS-Pol<br>Modify Policy | Creates a link that launches the Policy Editor helper. | | | X | | |
| Policy<br>OPSS-Pol<br>View Policy | Creates a link that launches the Policy Viewer helper. | | | X | | |
| Policy<br>OPSS-Pol<br>Open Policy for new Revision Cycle or Re-Open Policy for Additional Changes | Creates a link that launches the Policy Editor helper. | | | X | | |
| Policy Review Comment<br>OPSS-PolRevComm<br>Review Policy | Creates a link that launches the Policy Review View helper. | | | X | | |
| Control Plan<br>OPSS-RiskEnt<br>Baselines | Creates a link to launch the Get Baselines helper. | | | | X | |
| Resource<br>OPSS-Res<br>Resource Links | Creates a link to launch the Add a Resource Link helper. | | | | X | |
| Auditable Entity<br>OPSS-AudEnt<br>Weighted Risk Score | Calculates the sum of the products of each relevant Risk Factor value and its associated Risk Factor Weight. Risk Factor values are entered on the Auditable Entity. Risk Factor Weights are from the "nearest" Audit Risk Factor Preference object, matching the Audit Type specified on the Auditable Entity. | | | | | X |
| Audit<br>OPSS-Aud<br>Close Audit | Creates a link to launch the Close Audit helper. | | | | | X |

*Table 7. Computed fields in OpenPages with Watson solutions (continued)*

| **Object type label**<br>**Field group**<br>**Field name** | **Description** | **RCM** | **ORM** | **PCM** | **ITG** | **IAM** |
|---|---|---|---|---|---|---|
| Audit<br>OPSS-Aud<br>Plans | Creates a link to launch the Audit Launch helper. | | | | | X |
| Audit<br>Actual T&E | Calculates the sum of the T&E entries on all of the Timesheets for all of the Plans for this Audit. | | | | | X |
| Audit<br>Actual Hours | Calculates the sum of the Hours entries on all of the Timesheets for all of the Plans for this Audit. | | | | | X |
| Plan<br>OPSS-Plan<br>Actual Hours | Calculates the sum of the T&E entries on all of the Timesheets for all of the Plans for this Audit. | | | | | X |
| Plan<br>OPSS-Plan<br>Actual T&E | Calculates the sum of the Hours entries on all of the Timesheets for this Plan. | | | | | X |
| Process Diagram<br>OPSS-ProcDiag<br>ProDiaLnk | Creates a link that launches a process diagram. | | | | | X |
| Requirement Evaluation<br>RCM-Req-Eval<br>Refresh Assessment Guidance | Creates a link that launches a requirement evaluation. | X | | | | |

**Note:** IBM OpenPages Policy Management launches helper applications from URL fields. The computed fields are implemented as URL fields.

# Chapter 4. Helpers

IBM OpenPages with Watson solutions include several helpers.

The following table lists the helpers that are included for each solution by default.

- VRM = IBM OpenPages Vendor Risk Management
- RCM = IBM OpenPages Regulatory Compliance Management
- MRG = IBM OpenPages Model Risk Governance
- FCM = IBM OpenPages Financial Controls Management
- ORM = IBM OpenPages Operational Risk Management
- PCM = IBM OpenPages Policy Management
- ITG = IBM OpenPages IT Governance
- IAM = IBM OpenPages Internal Audit Management

*Table 8. Helpers in IBM OpenPages with Watson solutions*

| Helper | VRM | RCM | MRG | FCM | ORM | PCM | ITG | IAM |
|---|---|---|---|---|---|---|---|---|
| "Scenario Completion helper" on page 36 | | | | | X | | | |
| "KRI Value Creation utility" on page 36 | | | | | X | X | X | |
| "KPI Value Creation utility" on page 37 | | | | | X | X | X | |
| "RCSA Completion helper" on page 37 | | | | | X | | | |
| "RCSA Process Alignment helper" on page 38 | | | | | X | | | |
| "RCSA Launch Utility helper" on page 38 | | | | | X | | | |
| "RCSA Site Sync helper" on page 38 | | | | | X | | | |
| View Policy<br>**Note:** This helper and the Review Policy are the same helper. Each has a different function and depends upon where in the lifecycle the policy is. | | | | | | X | | |
| Review Policy<br>**Note:** This helper and the View Policy are the same helper. Each has a different function and depends upon where in the lifecycle the policy is. | | | | | | X | | |
| "Compare Policy View helper" on page 39 | | | | | | X | | |
| "Policy Unlock helper" on page 39 | | | | | | X | | |
| Publishing Batch Notifications | | | | | | X | | |

| *Table 8. Helpers in IBM OpenPages with Watson solutions (continued)* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Helper** | **VRM** | **RCM** | **MRG** | **FCM** | **ORM** | **PCM** | **ITG** | **IAM** |
| Policy Awareness View | | | | | | X | | |
| Attestation Create Report | | | | | | X | | |
| "Get Baselines helper" on page 41 | | | | | | | X | |
| "Create Resource Links helper" on page 41 | | | | | | | X | |
| "Close Audit helper" on page 41 | | | | | | | | X |
| "Add or Modify Plans helper" on page 41 | | | | | | | | X |
| "Timesheet Entry Helper" on page 42 | | | | | | | | X |
| "Timesheet Approval Helper" on page 42 | | | | | | | | X |
| Launch Program helper | X | X | X | X | X | X | X | X |

## Scenario Completion helper

When the Scenario Workshop is complete, the Operational risk team or the Scenario Owner updates the Scenario outcomes on the Scenario object. To finalize the Scenario, the Owner runs the Scenario Completion helper.

As facilitators of the Scenario Analysis process, the Operational Risk Team completes most of the activities in IBM OpenPages with Watson. The helper completes the following steps:

1. Validates data.
2. Creates a Scenario Results object.
3. Populates Scenario Result fields from the Scenario Analysis.
4. Runs the Scenario Result Detail report and attaches it to the Scenario result.

## KRI Value Creation utility

After the Key Risk Indicator (KRI) is defined, the KRI Value Creation utility determines whether it must generate a KRI Value object as a child of the KRI object.

The KRI Value Creation utility generates blank KRI Value objects that must be captured in the following week. The utility is started as a weekly task that is scheduled to run overnight. However, an administrator can manually start it if the scheduled task does not start automatically.

The utility reviews the KRIs and identifies any KRIs that are due for collection in the next seven days. The KRIs are identified based on the KRI **Frequency** and the **Frequency Offset** data values. If the KRI is marked as **Active**, the KRI Value Creation utility generates a child KRI value and populates the value with the following data:

- ID
- Description, based on the parent KRI.
- KRI owner, based on the parent KRI.

  The owner is the user who records the KRI value in OpenPages with Watson.

- Expected capture date.

  This date is a read-only field and is based on the **Frequency** and **Frequency Offset** values.
- Status of KRI Value, which is set to **Awaiting Collection**.

  If the KRI is marked as **Inactive**, the utility does not generate a blank value. The value object is initially set up as a placeholder with a status of **Awaiting Collection**.

## KPI Value Creation utility

After the KPI is defined, the OpenPages with Watson helper function determines whether it must generate a KPI Value object as a child of the KPI.

The KPI Value Creation utility generates blank KPI Value objects that must be captured in the following week. The utility is started as a weekly task that is scheduled to run overnight. However, an administrator can manually start it if the scheduled task does not start automatically.

The utility reviews the KPIs and identifies any KPIs that are due for collection in the next seven days. The KPIs are identified based on the KPI **Frequency** and the **Frequency Offset** data values. If the KPI is marked as **Active**, the KPI Value Creation utility generates a child KPI value and populates the value with the following data:

- ID.
- Description, that is based on the parent KPI.
- KPI owner, that is based on the parent KPI.

  The owner is the user who records the KPI value in OpenPages with Watson.
- Expected capture date.

  This date is a read-only field, which is based on the **Frequency** and **Frequency Offset** values.
- Status of KPI Value, which is set to **Awaiting Collection**.

  If the KPI is marked as **Inactive**, the utility does not generate a blank value. The value object is initially set up as a placeholder with a status of **Awaiting Collection**.

## RCSA Completion helper

The RCSA Completion helper allows the RCSA Coordinator to complete the Risk Assessment and create an evaluation tree for historical referencing.

The RCSA Coordinator receives a message that asks whether to proceed. When the coordinator confirms the message, the helper completes the following actions:

1. Sets the **Risk Assessment** status field to **Approved**.
2. Creates the following linked structure for the child Evaluation record:
   - Risk Assessment Evaluation
   - Process Evaluation
   - Risk Evaluation
   - Control Evaluation
3. Copies key data to the new Evaluation records and makes secondary associations.

   You must specify which fields to copy (**Settings** menu).

## RCSA Process Alignment helper

The RCSA Process Alignment helper allows the RCSA Coordinator to review the associate Processes, Risks, and Controls, and create further associations. The helper also sets the Processes, Risks, and Controls to a status of **Awaiting Assessment**.

When the RCSA coordinator wants to begin the RCSA cycle, the coordinator can start the helper from a URL link on the Risk Assessment Detail Page.

The task-driven helper completes the following actions when it is started:

1. Adds or removes Processes, Risks, and Controls
2. Reviews Process, Risk, and Control Ownership
3. Asks if the RCSA Coordinator wants to start the Assessment
   - If the coordinator responds **Yes**, the helper continues with the following processes:
     - Sets all Risk and Controls to **Awaiting Assessment**.
     - Sets the **Submit for Approval** field on the Risk object to **No**.
     - Sets the **Approve/Reject** field on the Risk object to a blank value.
     - Sets the **Rejection Comments** field on the Risk object to a blank value.
   - If the coordinator does not want to begin the RCSA cycle, save and close the Assessment.

## RCSA Launch Utility helper

The RCSA Launch Utility helper generates Risk Assessment objects for In scope entities.

The Launch Utility helper assists the administrator with starting the RCSA process in the following ways:

1. Creates a Risk Assessment under the Business Entity and associates all processes that are under that Business Entity to the Risk Assessment.
2. Asks for Risk Assessment details.

   The administrator provides values to fields on all generated Risk assessments, such as **Start Date**, **End Date**, and **Instructions / Guidance**.
3. Identifies all **In-scope** entities.
4. Generates a Risk Assessment object for all **In scope** entities.
5. Populates the Risk Assessment object with the values provided in step 1.
6. Sets the Risk Assessment status to **Not Started** and the **RCSA Administrator** field is populated with the appropriate user name.
7. Sends the RCSA coordinator an email that informs the coordinator that the RCSA cycle can start.

   The administrator can specify the content of the email through the **Settings** page. The Risk coordinator email uses information from the nearest Preference record that has the specified RCSA coordinator.

## RCSA Site Sync helper

The RCSA Site Sync helper synchronizes Business instances of object data with values in a Library data structure.

When the helper starts, it identifies all changes to the Master/Library object. The helper uses a **Library reference** field as a common key and synchronizes all local instances of the object with the Master.

## Policy Viewers

A series of Policy Viewers facilitate the process of creating, editing, reviewing, and approving policies and procedures. It aggregates multiple sections of a policy and associated procedures into a single narrative view for editing, reviewing and approving, while allowing customers to maintain standardization on a **Policy** template.

This helper has the following views:

- **Modify Policy** - Opened from a **Policy** object, the **Modify Policy** is an editable view that allows a policy author and owner to create and edit a **Policy** object and its associated **Procedures**. The **Modify Policy** viewer is only used as part of the **Datacentric** approach to Policy Management.
- **View Policy** - Opened from a **Policy** object, the **View Policy** is a read-only view that allows users to see a policy and its procedures in a formatted, narrative view (**Datacentric** and **Hybrid** approach) or from a **Policy Attachment** link (**Docucentric** approach).
- **Review Policy** - Opened from a **Policy Review Comment** object, **Review Policy** is a role-based view that facilitates the review and approval process. In addition to displaying the **Policy** and **Procedure** objects, or the **Policy Attachment** link, it includes the **Policy Review Comment** object that allow reviewers and approvers to submit feedback by either editing the **Policy** object directly or using the **Comment** form. Reviewers are presented with either an editable or read-only view of the policy and its procedures, depending on the parameter set in IBM OpenPages with Watson on the **Settings** page. Approvers are presented with a read-only view of the policy.

Configure this component to behave according to the customer methodology using settings and application text settings.

## Compare Policy View helper

The Compare Policy View helper enables users to view red-lined differences from one version of a policy to another. For example, a user can visually see the difference between a current draft of a policy and the published policy, or past expired versions.

The Compare Policy View is used with the **Datacentric** and **Hybrid** approaches.

Configure this component to behave as appropriate for the customers' methodology using settings and application text settings.

## Policy Unlock helper

The Policy Unlock helper is opened from the Policy object after the policy moves into the review and approval phase. The Policy Unlock helper unlocks the Policy object and its components (**Procedures**, **Attachments**, **Policy Review Comments**) for revision.

The Policy Unlock helper supports the three policy approaches: Datacentric, Docucentric, and Hybrid.

The Policy Unlock helper supports two use cases:

1. Reopening a **Policy** object for changes within a review cycle:
   - Sets the **Approval Status** to **In Revision**.
   - Unlocks any locked objects or attachments that are needed during the revision process.
   - Updates the version number.
2. Opening a Policy for a new revision cycle:
   - Sets the **Approval Status** to In Revision.
   - Unlocks the Policy object and its components (such as **Procedures**, Attachments).
   - Resets and clears fields such as **Publishing Date**, **Publishing Status**, **Next Review Date**.

- Updates the version number.
- Deletes or clears **Policy Review Comment** objects.
- Sets a flag on the corresponding published policy to signify that the draft is **In Revision**.

IBM OpenPages with Watson or the customer can configure this component to meet the customer methodology by using settings and application text settings.

## Publishing Batch Notification helper

The Publishing Batch Notification helper facilitates the process of promoting an approved draft policy to the published library, and moving the current published version to the expired library. It also retires a policy by moving the published policy to the published library and deleting the draft. You can use the Publishing Batch Notification Helper with the **Datacentric**, **Docucentric**, and **Hybrid** policy approaches.

The Publishing Batch Notification helper runs on a scheduled basis and performs the following tasks:

- Updates Draft Policy:
  - Sets fields on draft policy such as **Approval Status**, **Published Date**, and **Publishing Status**.
  - Updates a version number according to the significance of a policy change.
- Promotes a published **Policy** object to the expired library:
  - Renames the **Policy** object (appends `Expired – V#`).
  - Sets **Policy Location** to **Expired** and specifies the expiration date.
  - Maintains approvals and associations with objects such as **Entities** and **Mandates**.
  - Removes hybrid policy attachments.
- Promotes a draft **Policy** object to the published library:
  - Sets **Policy Location** to **Published**.
  - Maintains approvals and associations with objects such as **Entities** and **Mandates**.
  - Maintains existing object associations (**Risk Assessment**) on a published **Policy** object.
- Sends emails upon successful publishing.

Configure this component to behave as appropriate for the customer methodology by using settings and application text settings.

## Policy Awareness View helper

Policy Awareness View helper is an intuitive view that allows employees (high volume, low touch users) to easily read a policy and its procedures in a narrative format. The employee attests to reading and understanding the policy.

The Policy Awareness View helper completes the following tasks:

- Displays the **Policy** and its **Procedure** objects in a single read-only, narrative form with the look and feel of a corporate policy.
- Enables employees to attest to the policy with a single click and no navigation.
- Enables employees to request an exception to the policy attestation requirement.

Configure this component to behave as appropriate for the customer methodology by using registry and application text settings.

## Attestation Creation Report helper

The Attestation Creation Report helper is a scheduled notification. It can also be run from the Reporting menu (under Attestation Reports menu).

This notification report supports the Policy Awareness capability. It is intended to run on a scheduled basis and completes the following tasks:

- Finds all Campaign objects with a status of **Ready to Start** associated to published policies.
- Finds all active employees that match the same attestation requirements criteria defined on the Campaign object.
- Creates an **Attestation** record for each matching employee for that policy campaign.
- Drives the **Attestation** record to the employee's home page by using the configured Home page filtered list.
- Sends each employee an email notification and alerts them that an attestation is due.

## Get Baselines helper

Launched from a computed field link on the Control Plan object, this helper copies the selected Baseline from the Library to the IT operating environment, and copies, or creates and pre-populates, descendent Risks, Controls and Test Plans. The helper creates associations from the new elements back to the Library elements and writes status information to the Additional Description field on the created Baseline.

## Create Resource Links helper

Launched from a computed field link on the Resource object, this helper creates a Resource Link as a child of the starting Resource, and as a child of the selected Resource. The helper pre-populates fields on the created Resource Link object.

## Close Audit helper

Launched from a computed field link on the Audit object, the Close Audit helper facilitates automation of the Audit Close process.

It provides a summary and optionally details of the readiness for close status of the audit from which this helper was launched, and all of its components. When all components are ready, provides a Close Audit button which automates the actions taken when an audit is closed, such as setting and clearing field values, deleting object instances and locking objects.

Configure this component to behave as appropriate for the customer methodology using the registry and application text settings.

## Add or Modify Plans helper

Launched from a computed field link on the Audit object, the Add or Modify Plans helper facilitates creating and editing Audit Plans. It finds and populates Auditors to assign to the Plans.

These processes are time consuming, error prone, and cumbersome to perform with the platform user interface.

The helper provides a summary of and the ability to modify the existing Plans for this Audit. It provides the ability to add a new Plan for this Audit. It also enables the ability to search the Auditor pool or a selected portion of it, for Auditors who match the skills, attributes and availability requirements that are identified in the Plan. It provides the ability to view details of other Plans for each found Auditor, and to select and auto-populate the appropriate auditor from the search results.

Configure this component to behave as appropriate for the customer methodology using the registry and application text settings.

## Timesheet helpers

IBM OpenPages Internal Audit Management includes timesheet helpers.

Two helpers are available:

- **Timesheet Entry Helper**: This helper enables you to enter time and expenses.

  If you have the appropriate permissions, you can also use the Timesheet Entry Helper to enter time on behalf of another auditor.
- **Timesheet Approval Helper**: This helper enables you to review and approve time and expenses.

### Timesheet Entry Helper

Auditors use the Timesheet Entry Helper to enter time and expenses.

The Timesheet Entry Helper has the following capabilities:

- The helper includes data entry validations, and allows auditors to delete existing timesheet entries one row at a time.
- You can configure the helper to enable members of a user group to enter time on behalf of another auditor.
- Auditors can view all rejection comments at once, and can easily jump to the timesheets that they need to update.
- Auditors can search and filter for the Audit and Plan they want when adding a new timesheet row. To help the user choose, you can configure the Audit and Plan fields that are displayed.

To open the Timesheet Entry Helper from the Standard UI, click **Reporting** > **Audit Management Reports** > **Timesheet Entry Helper**. You can also add the helper to the Dashboard and to the Home Page.

**Note:** Do not configure the helper as an embedded home page report. If you do, the helper uses the entire home page and prevents the user from accessing the underlying content.

When an auditor creates and saves timesheet entries, Timesheet objects are created and populated for any new rows, and values are saved in any existing Timesheets. T&E expenses are a single entry per row per week; they are not broken down into expense categories. T&E is always entered and displayed in Base Currency.

You can configure the helper by using the settings under **Administration** > **Settings** > **Solutions** > **IAM** > **Timesheet Entry** > **Timesheet Entry Helper**.

### Timesheet Approval Helper

Time approvers for auditors, such as audit owners or plan owners, use the Timesheet Approval Helper to review and approve or reject time and expenses.

The Timesheet Approval Helper separates timesheet entry from timesheet approval. When you configure the helper, you specify who can approve or reject timesheets.

Approvers can handle all of their approvals at once, across Audits and Auditors. In addition, approvals can see the queue of timesheets that are awaiting approval.

When an approver rejects a timesheet, the auditor receives a notification email. This notification feature is optional.

To open the Timesheet Approval Helper from the Standard UI, click **Reporting** > **Audit Management Reports** > **Timesheet Approval Helper**. You can also add the helper to the Dashboard and to the Home Page.

**Note:** Do not configure the helper as an embedded home page report. If you do, the helper uses the entire home page and prevents the user from accessing the underlying content.

You can configure the Timesheet Approval Helper by using the settings under **Administration** > **Settings** > **Solutions** > **IAM** > **Timesheet Entry** > **Timesheet Approval Helper**.

# Chapter 5. Notifications

Notifications are emails that are sent to owners of a process as a reminder to act. These notifications can occur at different stages of a process or as a final step in a trigger.

All notifications that are sent from IBM OpenPages with Watson solutions use the following sender address. Configure the email address and server settings by using the appropriate solution abbreviation:

- `/OpenPages/Solutions/ORM/Email/From Email` - the sender address that is used to send notifications.
- `/OpenPages/Solutions/ORM/Email/From Name` - configure this item to identify the email sender name that is used by notifications.
- `/OpenPages/Common/Email/Mail Server` - configure this item to identify the email server that is used to send notifications.

  This item is used by lifecycles. For emails generated by lifecycle triggers, the sender address is specified in the `trigger.xml` file. The default is donotreply@openpages.com.

For information about email settings, see the *IBM OpenPages with Watson Administrators Guide*.

OpenPages with Watson solutions consist of several notifications. The following table lists the notifications that are included for each solution by default.

- VRM = IBM OpenPages Vendor Risk Management
- RCM = IBM OpenPages Regulatory Compliance Management
- MRG = IBM OpenPages Model Risk Governance
- FCM = IBM OpenPages Financial Controls Management
- ORM = IBM OpenPages Operational Risk Management
- PCM = IBM OpenPages Policy Management
- ITG = IBM OpenPages IT Governance
- IAM = IBM OpenPages Internal Audit Management

Workflows that are defined in GRC Workflow can also perform notifications. You can use both notifications and workflow email notifications for the same object type but you must consider how they interact and where they conflict. For more information, see *Configuring GRC Workflow* in the *IBM OpenPages with Watson Administrator's Guide*.

*Table 9. Notifications in IBM OpenPages with Watson solutions*

| Notification | VRM | RCM | MRG | FCM | ORM | PCM | ITG | IAM |
|---|---|---|---|---|---|---|---|---|
| "Issue and Action Bulletin notification" on page 46 | X | X | X | X | X | X | X | X |
| "KPI Reminder notification" on page 47 | | | | | X | X | X | |
| "KPI Breach notification" on page 47 | | | | | X | X | X | |
| "KRI Due notification" on page 47 | | | | | X | X | X | |
| "KRI Breach notification" on page 47 | | | | | X | X | X | |
| "Incident notification" on page 47 | | | | | | X | X | |
| "Questionnaire Assessment notification" on page 47 | X | X | X | X | X | X | X | X |

| *Table 9. Notifications in IBM OpenPages with Watson solutions (continued)* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Notification** | **VRM** | **RCM** | **MRG** | **FCM** | **ORM** | **PCM** | **ITG** | **IAM** |
| "TRRI Ingestion Error notification" on page 48 | | X | | | | | | |
| "WK Ingestion Error notification" on page 48 | | X | | | | | | |
| "New/Amended Regulatory Library Object notification" on page 48 | | X | | | | | | |
| Approval app notification | X | X | X | X | X | X | X | X |
| Loss Event Entry notification | | | | | X | | | |
| Control notification | X | X | X | X | X | X | X | X |
| Timesheet rejection notification | | | | | | | | X |

## Issue and Action Bulletin notification

During the closedown phase of the Issue Management and Remediation (IMR) process, an Issue and Action Bulletin is sent as an email notification to the users. The bulletin highlights important areas such as overdue issues and actions that are due for closure. The administrator can set the frequency of this notification by using the Issue Management and Remediation (IMR) bulletin.

When the Issue is defined, its status is set to open. The user provides the current due date. The due date is copied to a read-only field that contains the original due date. When the user creates an Issue, the Issue Owner (who might not be the same person who created the Issue) receives an email notification.

The Issue Owner identifies the actions necessary to resolve an issue. The following data is captured in an Action Item:

- Description
- Assignee
- Start Date
- Due Date
- Actual Closure date
- Status (Read Only)
- A comment to record the latest updates

The Issue Owner receives an email that summarizes the actions that require approval before the issue can be closed. The Owner can either accept or reject the closure of the issue. When actions are completed, the Issue Owner reviews the Issue and updates the status to closed. If any child actions are set to open or awaiting approval, the Issue Owner cannot close the issue.

Issues are only displayed if the lowest-level Business Entity has a child Preference object associated with it. If the Issue is generated from the lowest level Business Entity, or another object type, it is not included in this report. Define a Preference Object for every level on which to report. Other features such as the RCSA trigger use the closest parent with a Preference object. These features inherit the preference from closest parent object.

Users receive email notifications through the consolidated Issue and Action bulletins. The bulletin consolidates the following information:

- Issues that are assigned to the recipient in the past number days
- Actions that are assigned to recipient in the past number days
- Issues due for closure in the next number days

- Actions due for closure in the next number days
- Overdue issues
- Overdue actions
- Actions awaiting closure approval

## KPI Reminder notification

The KPI Reminder notification is an email that is sent to the KPI owner. It contains a list of all KPI values that the owner or recipient is required to capture in the next seven days.

## KPI Breach notification

The KPI Breach notification sends an email to the risk owner when a KPI breach status changes from **Green** to **Red** or from **Amber** to **Red**.

The KPI Breach notification is started by the KPI Lifecycle trigger. The email notification contains a link to the KPI that is in breach and advises the Risk Owner to review the breach and take appropriate actions.

## KRI Due notification

The KRI Due notification is an email that is sent to the KRI owner. It contains a list of all KRI values that the owner or recipient is required to capture in the next seven days.

## KRI Breach notification

The KRI Breach notification sends an email to the Risk Owner when a KRI breach status changes from **Green** to **Red** or from **Amber** to **Red**.

The KRI Breach notification is started by the KRI Lifecycle trigger. The email notification contains a link to the KRI that is in breach and advises the Risk Owner to review the breach and take appropriate actions.

## Incident notification

The Incident notification sends an email to a lifecycle assignee when an Incident is created and for each transition in the Incident lifecycle. A transition occurs when a user clicks a transition icon (**Lifecycle** > **Start**, **Send for Review**, **Escalate**, **Review Reject**, **Review Close**, **Send for Escalation Review**, **De-escalate**, **Escalation Review Close**, **Escalation Review Reject**, or **Re-open**) in the Incident detail view.

The Incident notification is started by the Incident Lifecycle trigger. The email notification contains the stage, status, and a link to the Incident.

## Questionnaire Assessment notification

The Questionnaire Assessment notification sends an email to a lifecycle assignee when a questionnaire assessment is created by a Program and for each transition in the lifecycle. A transition occurs when a user clicks a transition icon (**Submit**, **Submit and Close**, **Action** > **Reject**, **Action** > **Approve and Close**, **Action** > **Submit for Approval**, and **Action** > **Approve**) in the questionnaire UI.

The Questionnaire Assessment notification is started by the Questionnaire Assessment Lifecycle trigger. The email notification contains the stage, status, and a link to the Questionnaire Assessment.

## TRRI Ingestion Error notification

The TRRI Ingestion Error notification sends an email to TRRI Administrators if the import of a Thomson Reuters Regulatory Intelligence (TRRI) feed fails. TRRI Administrators are configured when you configure the TRRI feed in IBM OpenPages with Watson.

## WK Ingestion Error notification

The WK Ingestion Error notification sends an email to WK Administrators if the import of a Wolters Kluwer feed fails. WK Administrators are configured when you configure the WK feed in IBM OpenPages with Watson.

## New/Amended Regulatory Library Object notification

The New/Amended Regulatory Library Object notification sends an email if a Mandate, Sub-Mandate, or Requirement changes as a result of a Thomson Reuters Regulatory Intelligence or Wolters Kluwer import. The email is sent to the object's owner.

# Chapter 6. Reports

IBM OpenPages with Watson solutions consist of several reports.

There are additional reports installed with the OpenPages with Watson and available to all solutions, which are described in the *IBM OpenPages with Watson Administrator's Guide*.

The following table lists the reports that are included with each solution by default.

- FCM = IBM OpenPages Financial Controls Management
- ORM = IBM OpenPages Operational Risk Management
- PCM = IBM OpenPages Policy Management
- ITG = IBM OpenPages IT Governance
- IAM = IBM OpenPages Internal Audit Management

*Table 10. Reports by IBM OpenPages with Watson solution*

| **Report** | | **FCM** | **ORM** | **PCM** | **ITG** | **IAM** |
|---|---|---|---|---|---|---|
| Risk Assessment reports | | | | | | |
| | Risk Assessment List | X | X | X | X | X |
| | Risk Assessment Status | X | X | X | X | X |
| | Risk Assessment Summary | X | X | X | X | X |
| | Risk Assessment Issues and Action Items | X | X | X | X | X |
| Risk reports | | | | | | |
| | Risk Analysis | X | X | X | X | X |
| | Risk Heat Map | X | X | X | X | X |
| | Risk Rating by Entity | X | X | X | X | X |
| | Risk Rating by Category | X | X | X | X | X |
| | Top Risks | X | X | X | X | X |
| Control reports | | | | | | |
| | Risk and Control Matrix | X | X | X | X | X |
| | Control Effectiveness Map | X | X | X | X | X |
| Testing reports | | | | | | |
| | Testing Dashboard | X | X | X | X | X |
| Visualization reports | | | | | | |
| | Process Analysis | X | X | X | X | X |
| Indicator reports | | | | | | |

| *Table 10. Reports by IBM OpenPages with Watson solution (continued)* | | | | | | |
|---|---|---|---|---|---|---|
| **Report** | | **FCM** | **ORM** | **PCM** | **ITG** | **IAM** |
| | KRI Dashboard | | X | X | X | |
| | KPI Dashboard | | X | X | X | |
| Loss Event reports | | | | | | |
| | Loss Event Dashboard | | X | | | |
| | Loss Event Summary | | X | | | |
| | Loss Event Trend | | X | | | |
| | Risk vs Loss | | X | | | |
| Issue Management and Remediation reports | | | | | | |
| | ORM Issue Dashboard | | X | | | |
| | ORM Issues and Action Items | | X | | | |
| Scenario Analysis reports | | | | | | |
| | Scenario Summary | | X | | | |
| Capital Modeling reports | | | | | | |
| | Capital Contribution by Business Entity | X | | | | |
| | Capital Contribution by Risk Category | X | | | | |
| Regulatory Compliance reports | | | | | | |
| | Process Control Effectiveness by Mandate | | | X | | |
| | Regulatory Applicability Matrix | | | X | | |
| IT Asset reports | | | | | | |
| | Baseline | | | | X | |
| | Control Plan | | | | X | |
| IT Compliance reports | | | | | | |
| | IT Control Effectiveness by Mandate | | | | X | |
| | Requirements Library | | | | X | |
| | UCF Requirements Library | | | | X | |
| Audit Management reports | | | | | | |
| | Audit Universe | | | | | X |
| | Audit Plan | | | | | X |

| Table 10. Reports by IBM OpenPages with Watson solution (continued) | | | | | | |
|---|---|---|---|---|---|---|
| **Report** | | **FCM** | **ORM** | **PCM** | **ITG** | **IAM** |
| | Auditor Plan | | | | | X |
| | Audit Overview | | | | | X |
| | Internal Audit Report | | | | | X |
| | Audit Deviation | | | | | X |
| | Auditor Deviation | | | | | X |
| | Auditor Timesheet Dashboard | | | | | X |
| | Auditor Utilization Dashboard | | | | | X |
| | Pending Timesheet Approvals Dashboard | | | | | X |
| | Timesheet Entry | | | | | X |
| | Timesheet Approval Helper | | | | | X |
| Questionnaire reports | | | | | | |
| | Program Report | X | X | X | X | X |
| | Single Assessment Report | X | X | X | X | X |

## Risk assessment reports

Risk assessment reports provide support for management by driving better decision-making that leads to action. These reports are a part of the action stage of the Risk and Control Self-assessment (RCSA) process.

The following table describes the available risk assessment reports. Users can drill through some reports to detail information.

| Table 11. Risk assessment reports | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| Risk Assessment List | | Shows Risk Assessment details for a specified Business Entity and all of its descendants. |
| Risk Assessment Status | Risk Assessment Status Detail | Shows a stacked column chart showing the status of Risk Assessments for the specified Business Entity and its direct descendants. |

| *Table 11. Risk assessment reports (continued)* | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| Risk Assessment Summary | Risk Assessment Issues and Action Items | Shows Risk Assessment details along with all associated Risks and Controls. A drill-through report shows Issues and Action Items that are related to the Risk Assessments, Risks, or Controls. |
| Risk Assessment Issues and Action Items | | Shows all Issues and Action Items that are related to the selected Risk Assessment and its associated Risks and controls. Parent Object shows only the Risk Assessment, Risk, and Control parents.<br>The report prompts for two values: Business Entity and Risk Assessment. Data is filtered on the selected entity. Users can select from all Risk Assessments that are associated, whether directly or indirectly, to the selected Business Entity. |

## Risk reports

Risk reports are available in IBM OpenPages with Watson solutions. Users can drill through some reports to detail information.

| *Table 12. Risk reports* | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| Risk Analysis | | Shows Risks grouped by Process for a specified Business Entity. |
| Risk Heat Map | Risk Detail | Shows a table that aggregates Risks by Residual Impact and Likelihood for a specified Business Entity. |
| Risk Rating by Entity | Risk Rating by Entity Detail | Shows Residual Risk Rating summary information for the selected Business Entity and its descendants. A drill-through report shows Risk details. |
| Risk Rating by Category | Risk Rating by Category Detail | Shows Risk Category and Residual Risk Rating summary information for the selected Business Entity. A drill-through report shows Risk details. |

| Table 12. Risk reports (continued) | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| Top Risks | | Show a summary of the top Risks ranked by Residual Risk Exposure, and also shows the Inherent Risk Exposure.<br>By default, Risk quantitative assessment fields are not included in the following solutions so this report may not be appropriate for users of these solutions:<br>• IBM OpenPages Policy Management<br>• IBM OpenPages Financial Controls Management<br>• IBM OpenPages IT Governance |

## Control reports

Control reports are available in IBM OpenPages with Watson solutions. Users can drill through from some reports to detail information.

| Table 13. Control reports | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| Risk and Control Matrix | | Shows Risk and Control data for specified Business Entity and Processes. |
| Control Effectiveness Map | Control Effectiveness Detail | Shows counts of Controls grouped by Processes and Operating Effectiveness. A drill-through report contains more detail. |

## Testing reports

Testing reports are available in IBM OpenPages with Watson solutions. Users can drill through to detail information.

| Table 14. Testing reports | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| Testing Dashboard | Testing Dashboard Detail | Shows summary Test Result information for the selected Business Entity. A drill-through report shows detail and trend information. |

## Visualization reports

Visualization reports are available in IBM OpenPages with Watson solutions. Users can drill through to detail information.

*Table 15. Visualization reports*

| Name | Drill-through report | Description |
|---|---|---|
| Process Analysis | Business Process Flow diagram<br>Business Entity Hierarchy diagram<br>Risk Heat Map | Shows Risks and Controls in the context of a process diagram. Provides an aggregated view of Risk and Controls with risk rating and control effectiveness at the Process and Business Entity level. |

## Indicator reports

Reporting is the final stage of the Key Risk Indicator (KRI) or Key Performance Indicator (KPI) cycle. After the owner defines the KRIs or KPIs, and captures their values, standard indicator reports are provided for summary information for the selected business entities.

The following table describes the Indicator reports available in the IBM OpenPages Operational Risk Management, IBM OpenPages Policy Management, and IBM OpenPages IT Governance solutions. Users can drill through to detail information.

*Table 16. Indicator reports*

| Name | Drill-through report | Description |
|---|---|---|
| KRI Dashboard | KRI Dashboard Detail | Displays summary KRI information for the selected Business Entity and its descendants. A drill-through report shows detail and trend information. |
| KPI Dashboard | KPI Dashboard Detail | Displays summary KPI information for the selected Business Entity and its descendants. A drill-through report shows detail and trend information. |

## Loss Event reports

Loss Event reports ensure that information about loss events is collected consistently across the organization.

The following table describes the Loss Event reports available in IBM OpenPages Operational Risk Management. Users can drill through from some reports to detail information.

*Table 17. Loss Event reports*

| Name | Drill-through report | Description |
|---|---|---|
| Loss Event Dashboard | Loss Event Dashboard Detail | Shows the count of Loss Events for the selected Business Entity and its descendants, broken out by Status and Risk Category. A drill-through report shows detail information. |

| *Table 17. Loss Event reports (continued)* | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| Loss Event Summary | Loss Event Detail | Shows a column chart (representing entities) showing Net Loss broken out by Risk Category. A drill-through report shows Loss Event details. |
| Loss Event Trend | Loss Event Trend Detail | Shows the trend of Net Loss by Risk Category for a specified Business Entity. |
| Risk vs Loss | | Shows the annual Net Loss of a Business Entity for a specified date compared with the current Residual Risk Exposure. |

## Issue Management and Remediation reports

Issues are items that are identified against the documented framework. They are deemed as negatively affecting the ability to accurately manage and report risk.

The following table describes the issue management and remediation reports available in IBM OpenPages Operational Risk Management. Users can drill through from some reports to detail information. For users of other solutions, there are two platform reports: Issues List and Issues and Action Items.

| *Table 18. Issue Management and Remediation reports* | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| ORM Issue Dashboard | Issue Dashboard Detail | Shows a graphical representation of the number of issues by status. The report is scoped on the entity object and date range. |
| ORM Issues and Action Items | | Variant of the Issue Dashboard Detail report. Shows summary information on the associated action items. |

## Scenario Analysis reports

Scenarios involve the quantification of significant events (impacts and frequencies for potential events) that can be realized for an organization. The analysis captures the what-if scenarios of losses. The scenario analysis reports support the review of existing scenarios for each Business unit.

The following table describes the scenario analysis reports available in IBM OpenPages Operational Risk Management. Users can drill through to detail information.

| *Table 19. Scenario Analysis reports* | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| Scenario Summary | Scenario Result Detail | Shows all Scenarios by Entity. Details include ID, Description, Status, and Owner. |

## Capital modeling reports

Capital modeling reports provide information about capital contributions.

The following table describes the capital modeling reports available in IBM OpenPages Operational Risk Management.

*Table 20. Capital Modeling reports*

| Name | Drill-through report | Description |
|---|---|---|
| Capital Contribution by Business Entity | | Displays the capital contribution to the overall Firm capital by each Business Entity. |
| Capital Contribution by Risk Category | | Displays the capital contribution to the overall Firm capital by each Risk Category. |

## Regulatory Compliance reports

The following table describes the Regulatory Compliance reports available in IBM OpenPages Policy Management. Users can drill through some reports to detail information.

*Table 21. Regulatory Compliance reports*

| Name | Drill-through report | Description |
|---|---|---|
| Process Control Effectiveness by Mandate | Process Control Effectiveness by Sub-Mandate | For a selected Business Entity, the report shows associated Mandates with the % of Effective Controls associated to Processes. A drill-through report shows detail information. |
| Regulatory Applicability Matrix | | Shows a Matrix view of the Mandates and the Business Entities for which they apply. |

## IT Asset reports

The following table describes the IT Asset reports available in IBM OpenPages IT Governance.

*Table 22. IT Asset reports*

| Name | Drill-through report | Description |
|---|---|---|
| Baseline | | Shows key attributes of the selected Baseline, along with associated Requirements, and recommended Control Activities and Test Procedures. |
| Control Plan | | Shows key attributes of the selected Control Plan, along with associated Baselines, their Requirements, and recommended and implemented Control Activities and Test Procedures. |

## IT Compliance reports

The following table describes the IT Compliance reports available in IBM OpenPages IT Governance. Users can drill through from some reports to detail information.

| *Table 23. IT Compliance reports* | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| IT Control Effectiveness by Mandate | IT Control Effectiveness by Sub-Mandate | For a selected Business Entity, the report shows associated Mandates with the % of Effective Controls associated to Control Plans. A drill-through report shows detail information.<br><br>The report looks at IT operating environment Controls that are shared between Mandates and Baselines in the IT operating environment. It provides a view of Control Operating Effectiveness by Mandate. One sub-report drills through for the selected Mandate to show Control Operating Effectiveness by Sub-Mandate. The other sub-report drills through for the selected Mandate to show Test Results grouped by Resource (type=Application). This report provides a view of how compliant each application is. This report is always run from the IT operating environment (it filters out the Library Business Entity). |
| Requirements Library | | For the selected Requirements, the report shows all applicable laws and regulations.<br><br>It reports hierarchy upwards from the Requirements that fit the prompt scoping, to the Sub-Mandates and Mandates that each of those Requirements satisfy. This shows you that meeting this one Requirement satisfies many Laws. The report has one page per Requirement and associated Mandates. This report is run from the Library. |
| UCF Requirements Library | | For the selected UCF Harmonized Controls, the report shows all applicable Authority Documents. |

## Audit Management reports

The following table describes the Audit Management reports available in IBM OpenPages Internal Audit Management. Users can drill through some reports to detail information.

| *Table 24. Audit Management reports* | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| Audit Universe | | For the selected audit organization, this report shows Auditable Entities, including risk ranking and previous audit results.<br><br>Scoped by Business Entity, a user can choose sort order. If the selected Business Entity is in the Internal Audit business hierarchy, the report shows the portion of the audit universe that is owned by that internal audit team. If the Business Entity is in the organizational hierarchy, the report shows elements of the audit universe that are associated with that Business Entity or any descendent Business Entities. This report is used in the early annual planning stages to determine which elements of the audit universe to audit this year. |
| Audit Plan | Audit Plan Detail | For the selected audit organization and date range, this report provides a GANTT chart view of the Audit Plan.<br><br>Scoped by Business Entity and Date Range, a user can choose to display information by days, weeks, months, or quarters. Selected date range displays the current year plan, a 3 or 5-year plan, or a planning time frame. When viewing the report, you can view Detail View to show details for each scheduled audit for each Auditable Entity. View Summary View to view a roll-up of the audits for each Auditable Entity. If the Audit Scheduled Start Date and Scheduled End Date overlap with a cell, then the entire cell is highlighted. Summary cells that are shown in red indicate more than one audit is scheduled during that time for that Auditable Entity. The report is filtered to include only Audits whose status is set to Planned or Scheduled. |
| Auditor Plan | Auditor Plan Detail | For the selected audit organization, Auditors and date range, this report provides a GANTT chart view of Plans.<br><br>Scoped by Business Entity, Auditor, and Date Range, you can display information by days, weeks, months, or quarters. The Auditors available are those who are associated with the selected Business Entity or its descendants. Selected date range displays the current year plan or a planning time frame. When viewing the report, you can toggle between Detail View (shows details for each Plan for each Auditor) and Summary View (shows only a roll-up of the Plans for each Auditor). If an Auditor is scheduled for more than one Plan in a given column, then the entire cell is highlighted. Summary cells that are shown in red indicate more than one Plan that is assigned during that time for that Auditor. The report does not utilize the Percent Allocated information on the Plan to determine whether there is a conflict. |

*Table 24. Audit Management reports (continued)*

| Name | Drill-through report | Description |
|---|---|---|
| Audit Overview | • Audit Findings Detail<br>• Audit Issues Detail<br>• Audit Review Comments Detail | For the selected Audit, view the status of its Audit Sections and Workpapers, and view associated Findings, Issues and Audit Review Comments.<br>Scoped by Audit, the report includes Findings, Issues, and Review Comments that are direct children of the Audit, Sections, and Workpapers. Clicking the number of Issues, Findings, or Audit Review Comments starts a detail report, which includes more details and provides links to the objects in the application. |
| Internal Audit Report | | Complete report for the selected Audit, including an executive summary and associated Findings and Issues.<br>Scoped by Auditable Entity and then by Audit. Includes Findings associated to Audits, Audit Sections and Workpapers, and Issues associated with the Audit. |
| Audit Deviation | | For the selected Audit, view its Plans and Audit Sections, including schedule and budget information, with highlights for significant deviations.<br>This report lists the plans and sections for the selected Audit. It includes schedule and budget information and highlights significant deviations. Cells shown in yellow indicate missing key information. Cells shown in red indicate an unfavorable deviation from plan of more than 20%. Scoped by Auditable Entity and then by Audit. Includes the selected Audit, and Plans and Audit Sections associated directly to the Audit. |
| Auditor Deviation | | For the selected Auditors, view their planned and actual dates, hours and expenses.<br>Scoped by Auditors Business Entity, Auditor and Date Range. The Auditors available are those who are associated with the selected Business Entity or its descendants. Selected date range provides the ability to view a particular time frame. Report shows Plans for each selected Auditor including the Scheduled, Expected and Actual Start and End Dates, the number of planned hours for each, and the number of actual timesheet hours, and the amount of planned and actual T&E recorded against each Plan during each time period. Cells shown in red indicate amounts that are 20% or more larger than planned amounts. Includes all Plans where the Auditor is the selected Auditor; Plans that do not have an assigned Auditor are not included in this report. The report includes a summary row for each Auditor and for the entire report. It defaults to HTML format and is also available in Microsoft Excel format. |

| *Table 24. Audit Management reports (continued)* | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| Auditor Timesheet Dashboard | | For the selected Auditors, view the status of their timesheets for a number of weeks prior to a selected date.<br>The Lead Auditor and Audit Managers can use this dashboard to track auditors who are not submitting time and to know whether resource metrics are up-to-date. They can drill down to see the details for a week for a particular auditor. |
| Auditor Utilization Dashboard | | For the selected Auditors and a selected year, view Auditor utilization.<br>Audit Managers can use this dashboard to make sure that they are making good use of their auditor resources, and also to ensure that auditors are not being over worked. |
| Pending Timesheet Approvals Dashboard | | For the selected Auditors, view the timesheets that are waiting approval for a selected number of weeks prior to a selected date.<br>The Timesheet Approver, Lead Auditor, and Audit Manager can use this dashboard to monitor outstanding timesheet entries. They can drill down for further information |
| Timesheet Entry Helper | | See "Timesheet Entry Helper" on page 42. |
| Timesheet Approval Helper | | See "Timesheet Approval Helper" on page 42. |

## Questionnaire reports

The following table describes the Questionnaire reports.

| *Table 25. Questionnaire reports* | | |
|---|---|---|
| **Name** | **Drill-through report** | **Description** |
| Program Report | | For a selected Program, the report shows overall score, questionnaire progress, and response summary per section. |
| Single Assessment Report | | For a selected questionnaire assessment, the report shows sections, questions, and answers. |

# Chapter 7. Triggers

The IBM OpenPages with Watson solutions include several triggers.

You can use triggers together with the GRC Workflow feature. For more information, see *Configuring GRC Workflow* in the *IBM OpenPages with Watson Administrator's Guide*.

The following table lists the triggers that are included with each solution by default.

- VRM = IBM OpenPages Vendor Risk Management
- RCM = IBM OpenPages Regulatory Compliance Management
- MRG = IBM OpenPages Model Risk Governance
- FCM = IBM OpenPages Financial Controls Management
- ORM = IBM OpenPages Operational Risk Management
- PCM = IBM OpenPages Policy Management
- ITG = IBM OpenPages IT Governance
- IAM = IBM OpenPages Internal Audit Management

*Table 26. Triggers in IBM OpenPages with Watson solutions*

| Trigger | VRM | RCM | MRG | FCM | ORM | PCM | ITG | IAM |
|---|---|---|---|---|---|---|---|---|
| "Risk and Control Self-assessments triggers" on page 64 | X | X | | X | X | X | X | X |
| "Control lifecycle triggers" on page 68 | X | X | | X | X | X | X | X |
| "Visualization triggers" on page 64 | X | X | X | X | X | X | X | X |
| "KRI and KPI Lifecycle triggers" on page 64 | | | | | X | X | X | |
| "Loss Event Lifecycle triggers" on page 65 | | | | | X | | | |
| "Questionnaire Assessment Lifecycle triggers" on page 69 | X | X | X | X | X | X | X | X |
| "Policy Import trigger" on page 71 | | | | | | X | | |
| "Policy Lock trigger" on page 72 | | | | | | X | | |
| "Audit Risk Rating Computations trigger" on page 72 | | | | | | | | X |
| "Audit Close Automation trigger" on page 73 | | | | | | | | X |
| "Incident Lifecycle triggers" on page 69 | | | | | | X | X | |
| "Model Scorecard triggers" on page 73 | | | X | | | | | |
| "Exchange Rate trigger" on page 73 | | | | | X | | | |

## New lifecycle triggers in version 7.2.0.1

Following enablement of the 7.2 lifecycle feature in OpenPages, any object that uses the new lifecycle and has a preexisting lifecycle must be modified to use the new lifecycle field groups and fields.

Triggers provide the transitions that move issues through an investigation lifecycle. Lifecycles define the stages that an object type can follow.

OpenPages Version 7.2.0.1 introduces three new lifecycles; controls, issues, and loss events. In 8.1.0 the issue triggers were deprecated and functionality moved to GRC Workflow.

For more information about control triggers, see "Control lifecycle triggers" on page 68.

Loss events had existing triggers to assist with the existing lifecycle of the objects, and these triggers are updated to use the new lifecycle fields. If you are using these triggers in versions earlier than OpenPages Version 7.2.0.1, you must modify the appropriate fields that were previously used for the loss event triggers in the `openpages-solutions.xml` file.

Before OpenPages Version 7.2.0.1, a trigger existed for Loss Event objects to verify the date fields and to populate the approver fields on the loss event at the time the user set the **OPSS-LossEv:Submit** field to **Yes**. As of OpenPages Version 7.2.0.1 and later, this trigger now fires on the lifecycle transition from Open to Submit, so the trigger now fires on the field **OPLC-Std:LCTransition** with a value of **Submit**. The **OPSS-LossEv:Submit** field on the loss event is now redundant.

A second trigger existed to lock the loss event and its children upon closure. Before OpenPages Version 7.2.0.1, this trigger was fired on the field **OPLC-LossEv:Status** with a value of **Approved**. As of OpenPages Version 7.2.0.1 and later, this trigger now fires on the **OPLC-Std:LCStage** field with a value of **Closed**.

For more information, see "Loss Event lifecycle triggers (version 7.2.0.1 and later)" on page 65.

Existing custom client solutions that have triggers, field dependencies, pick lists, or reports that use fields that are connected to the existing lifecycle of the objects must be reviewed and updated. Where necessary, fields to be replaced on the object (such as the **Status** or **Assignee** fields) must be updated in the configuration for the existing solution.

## Lifecycle configuration

In IBM OpenPages with Watson, lifecycles can be configured to reduce the need to implement business logic through custom triggers.

Lifecycle can be configured to set field values during a transition on fields other than the LC fields. These fields can be short or long text, single and multiple enumerated, boolean, integer, decimal, date, user, and user group field types. Depending upon the field type, the field values can be set in the following ways:

- as an absolute or relative value
- as an addition to an existing value in the field
- populated based upon a value in another field

For example, this could be used to copy the lifecycle Status field value to the "normal" status field, so that existing views, reports and helpers can continue to use that status field value.

Lifecycle can also be configured with conditional logic to gate transitions. You can use boolean logic using field values on the object and on immediate child and parent objects. The logic can include values from text, single and multiple enumerated, boolean, integer, decimal, and date field types. For example, this could be used to prohibit submitting a Loss Event for approval if it does not have a recognition Date value. If the conditions are not met, then the transition processing is stopped and an error is displayed in the user interface, and recorded in the log.

For more information on how to configure lifecycles, see the *Trigger Developer Guide*.

## Object types that contain triggers

Before you use the ObjectManager tool to load XML instance data, disable triggers on any object types for which you want to load data.

The following table lists the object types for which triggers are included by default.

- VRM = IBM OpenPages Vendor Risk Management
- RCM = IBM OpenPages Regulatory Compliance Management
- MRG = IBM OpenPages Model Risk Governance
- FCM = IBM OpenPages Financial Controls Management
- ORM = IBM OpenPages Operational Risk Management
- PCM = IBM OpenPages Policy Management
- ITG = IBM OpenPages IT Governance
- IAM = IBM OpenPages Internal Audit Management

*Table 27. Object types that contain triggers in IBM OpenPages with Watson solutions*

| **Object type** | **VRM** | **RCM** | **MRG** | **FCM** | **ORM** | **PCM** | **ITG** | **IAM** |
|---|---|---|---|---|---|---|---|---|
| Data Input | X | X | X | X | X | X | X | X |
| Data Output | X | X | X | X | X | X | X | X |
| Risk | X | X | X | X | X | X | X | X |
| Control | X | X | X | X | X | X | X | X |
| Questionnaire Assessment | X | X | X | X | X | X | X | X |
| Loss Event | | | | | X | | | |
| Loss Impact | | | | | X | | | |
| Loss Recovery | | | | | X | | | |
| KPI Value | | | | | X | X | X | |
| KRI Value | | | | | X | X | X | |
| File (SOXDocument) | | | | | | X | | |
| Policy | | | | | | X | | |
| Audit | | | | | | | | X |
| Audit Review Comment | | | | | | | | X |
| Audit Section | | | | | | | | X |
| Finding | | | | | | | | X |
| Plan | | | | | | | | X |
| Timesheet | | | | | | | | X |
| Workpaper | | | | | | | | X |
| Incident | | | | | | X | X | |
| Model Scorecard | | | X | | | | | |

## Risk and Control Self-assessments triggers

The Risk Assessments process is used to identify, assess, and quantify a risk profile of a business. Each Risk is assessed on either a Qualitative or Quantitative basis.

Triggers provide the process workflow for Risk Control and Self-assessment of the business.

When a Risk is saved, the Qualitative risk rating trigger determines a Risk Rating of Low, Medium, High, or Very High. The trigger also populates the hidden Quantitative fields: Severity, Frequency, and Exposure.

When a Risk is saved, the Quantitative risk rating trigger completes the following actions:

1. Computes the Exposure (Frequency x Severity)
2. Computes the Risk Rating as Low, Medium, High, or Very High
3. Derives the Impact value (1 - 10) based on a mapping table for each Business Unit that is stored in its Preference record.
4. Derives the Likelihood value (1 - 10) based on a mapping table for each Business Unit that is stored in its Preference record

The following triggers are used for Risk and Control Self-assessments:

- RCSA Quantitative trigger
- RCSA Qualitative trigger
- Risk Approval Submission trigger
- RCSA Risk and Control Approval trigger

## Visualization triggers

The Visualization triggers prevent a user from adding new Risks as children of the Data Input and Data Output object types. The Data Input and Data Output objects are children of the Process and can have associations only to existing Risks. The data input object represents elements of a flow to depict an input into the Business Flow. The data output object depicts an output from activities within a process, such as running a report or updating a CRM system.

Risks can be added only as children of these object types by associating existing Risks to them. Data Input and Data Output object types cannot be primary parents of Risks.

## KRI and KPI Lifecycle triggers

The KRI and KPI Lifecycle triggers calculate and maintain field values on the KRI/KPI and KRI/KPI Value object types. The trigger occurs only if the Collection status of the KRI or KPI value is set to Collected.

When a KRI or KPI Value object is updated, associated, or disassociated, the trigger completes the following steps:

1. Determines whether KRI or KPI is set for approval.
   - If the status is **Yes**, the trigger updates the status to **Awaiting Approval** and proceeds with steps 2, 3, 4, and 6.
   - If the status is **No**, the trigger updates the status from **Awaiting Collection** to **Collected** and proceeds with steps 2, 3, 4, and 5.
2. Copies the current threshold information from the KRI or KPI to the child KRI or KPI Value.
3. Evaluates the Breach status.
4. Copies the KRI or KPI **Value**, **Value Date**, **Collection**, and **Breach** status to the parent KRI or KPI.
5. If the status of the KRI or KPI **Breach** field changed from **Green** or **Amber** to **Red**, the trigger sends an email notification to the Risk Owner to inform the owner of the breach.

6. If the status is set to **Awaiting Approval**, the KRI or KPI Value is displayed on the home page of the KRI or KPI Owner. The KRI or KPI Owner can approve or reject the value:
   - If the KRI or KPI Owner saves the record with a **Reject** status, the KRI or KPI **Value** and **Value Date** are changed to a blank and the KRI or KPI Value status is set to **Awaiting Collection**.
   - If the KRI or KPI Owner saves the record with an **Approved** status, the **Collection** status changes to **Collected** on the **Value** field and on the KRI or KPI.

   **Note:** When the KRI or KPI owner defines the KRI or KPI, the owner can specify the details regarding its approval.

## Loss Event Lifecycle triggers

The Loss Event Lifecycle triggers calculate and maintain three fields on the Loss Event object, when related fields are created or changed on any descendant Loss Impact and Loss Recovery objects.

The triggers automate the approval process and remediation performance of Loss Event as described in the triggers for Loss Event Approval Submission and Loss Event Approval.

The loss event lifecycle process consists of three triggers:

- "Loss Event Computation trigger" on page 65
- "Loss Event Approval Submission trigger" on page 65
- "Loss Event Approval trigger" on page 65

### Loss Event Computation trigger

The Loss Event Computation trigger computes summary values in system base currency on a Loss Event that is based on associated Loss Impact and Recoveries.

### Loss Event Approval Submission trigger

The Loss Event Approval Submission trigger changes a Loss Event from an Open event to the Approval stage of its lifecycle. The trigger validates data.

The trigger occurs when the user transitions the Loss Event Lifecycle from **Open** to **Submit**.

The trigger sets the LC Due Date to 14 days from the submission date

### Loss Event Approval trigger

The trigger locks the Loss Event and any Child Impact and Recoveries.

The trigger occurs when the user transitions the Loss Event Lifecycle from **Open** or **Awaiting Approval** to **Closed**.

## Loss Event lifecycle triggers (version 7.2.0.1 and later)

Triggers provide the transitions that move loss events through an investigation lifecycle. Lifecycles define the stages that an object type can follow.

At each stage, the system:

- Identifies a lifecycle assignee
- Defines the actions available to move to a different stage
- Automatically sends an email to the new lifecycle assignee
- Defines other attributes that are related to the current stage

The lifecycle for loss events uses the following stages:

- New

- Open
- Awaiting Approval
- Awaiting Approval L1
- Awaiting Approval L2
- Closed

When a loss event is created, the system sets the lifecycle to the New stage and sends an email to the first lifecycle assignee. When the user completes the task, the trigger moves the object to the next task and the next user. A user can add a comment with every transition. Transitions take place when users open a loss event object in the detail view and click Lifecycle > *<transition icon>*. The stage determines the transition icon that is displayed.

**Attention:** Before OpenPages Version 7.2.0.1, a trigger existed for Loss Event objects to verify the date fields and to populate the approver fields on the loss event at the time the user set the **OPSS-LossEv:Submit** field to **Yes**. As of OpenPages Version 7.2.0.1 and later, this trigger now fires on the lifecycle transition from Open to Submit, so the trigger now fires on the field **OPLC-Std:LCTransition** with a value of **Submit**. The **OPSS-LossEv:Submit** field on the loss event is now redundant.

A second trigger existed to lock the loss event and its children upon closure. Before OpenPages Version 7.2.0.1, this trigger was fired on the field **OPLC-LossEv:Status** with a value of **Approved**. As of OpenPages Version 7.2.0.1 and later, this trigger now fires on the **OPLC-Std:LCStage** field with a value of **Closed**.

The following table summarizes how the system handles loss events and sets the lifecycle assignee. The Transition icon column contains the name of the Lifecycle ><*transition icon*> in the issue detail view that a user clicks to trigger the transition to the next stage.

*Table 28. L Lifecycle process and stage owners for loss events*

| Stage | Lifecycle assignee | Transition icon | Next stage | Next Status |
|---|---|---|---|---|
| New | Owner | **Start** | Open | Open |
| Open | Owner | **Submit** | Closed | Closed |
| Open | Owner | **Submit** | Awaiting Approval | Awaiting Approval |
| Open | Owner | **Submit** | Awaiting Approval L1 | Awaiting Approval L1 |
| Awaiting Approval | Approver | **Reject Approval** | Open | Approval Rejected |
| Awaiting Approval | Approver | **1 Stage Close** | Closed | Approved 1 level |
| Awaiting Approval L1 | Approver | **Send For L2 Approval** | Escalation Review | Escalation Review |
| Awaiting Approval L1 | Approver | **Reject L1 Approval** | Open | Approval L1 Rejected |
| Awaiting Approval L2 | Approver L2 | **2 Stage Close** | Closed | Approved 2 levels |
| Awaiting Approval L2 | Approver L2 | **Send Back to L1 Approval** | Awaiting Approval L1 | Sent Back to L1 |
| Awaiting Approval L2 | Approver L2 | **Reject L2 Approval** | Open | Approval L2 Rejected |

When a **Submit** transition is made, the trigger compares the Gross Loss with the threshold values provided in the Preference record associated with the nearest Business Entity to the loss event. For a Gross Loss less than threshold 1, the loss event transitions to the Closed stage. (This is a Loss Event 0 Stage lifecycle.)

For loss events that have a Gross Loss greater than threshold 1 and less than threshold 2, the **Approver** field is copied from the Preference record to the loss event. The loss event transitions to the Awaiting Approval stage. (This is a Loss Event 1 Stage lifecycle.) By default, the trigger sets the Due Date to be 14 days from the date of submission.

For loss events that have a Gross Loss greater than threshold 2, both the **Approver** and **Approver L2** fields are copied from the Preference record to the loss event. The loss event is transitioned to the Awaiting Approval L1 stage. (This is a Loss Event 2 Stage lifecycle.) By default, the trigger sets the Due Date to be 14 days from the date of submission.

If the loss event is transitioned back to the Open stage, then the trigger runs again on **Submit** and, if the Gross Loss has changed, might alter the lifecycle. When the loss event is transitioned to the Closed stage, a trigger closes and locks all of the child impacts and recoveries. The trigger then locks the loss event.

#### Loss event notification

The loss event notification sends an email to a lifecycle assignee when a loss event is created and for each transition in the loss event lifecycle. A transition occurs when a user clicks a transition icon (Lifecycle > **Start**, **Submit**, **Reject Approval** , **1 Stage Close**, **Send For L2 Approval**, **Reject L1 Approval** , **2 Stage Close**, **Send Back to L1 Approval** , or **Reject L2 Approval** ) in the loss event detail view.

The loss event notification is started by the loss event lifecycle trigger. The email notification contains the stage, status, due date, comment, and a link to the loss event.

The link to the loss event can either be to the detail page in OpenPages, or to the approval app, or to both. Which links to include is defined by the **AppData** field pick list on the loss event and controlled by the **Stage** field.

#### Loss events and GRC Workflow

You can use both configurable lifecycles and workflows for Loss Events but you must consider how they interact and where they conflict. For more information, see *Configuring GRC Workflow* in the *IBM OpenPages with Watson Administrator's Guide*.

## Conditions that control the Lifecycle button

When an object that uses lifecycles is opened in a detail or activity view, the **Lifecycle** > **<transition icon>** button is displayed or hidden based on the current user and lifecycle information on the object.

It is displayed if all of the following conditions are met:

- The reporting period is the current reporting period
- The following fields are defined on the object type: LCStage, LCTransition, LCAssignee, LCComment, and LCAppData
- LCStage has a non-empty value
- One or more transitions are mapped to the current LCStage value with a picklist dependency
- The current user is set in LCAssignee, is a member of a group set in LCAssignee, or has explicit write permission to the object

It is hidden if any of the conditions are not met.

The Lifecycle button is hidden if changes are made that interfere with a lifecycle process. If you add fields to an object type after object instances exist, default values are not assigned to the new fields. Fields such as LCStage and LCAssignee do not likely have valid values on the existing instances. The Lifecycle button is then hidden, which ensures that new lifecycles do not interrupt previous lifecycles for existing object instances.

If an object type has both a workflow and a configurable lifecycle, the workflow **Actions** button in Task Views in the Task Focused UI takes priority over the lifecycle **Actions** button. For more information, see *Configuring GRC Workflow* in the *IBM OpenPages with Watson Administrator's Guide*.

## Control lifecycle triggers

Triggers provide the transitions that move controls through an attestation lifecycle. Lifecycles define the stages that an object type can follow. At each stage, the system:

- Identifies a lifecycle assignee
- Defines the actions available to move to a different stage
- Automatically sends an email to the new lifecycle assignee
- Defines other attributes that are related to the current stage

The lifecycle for controls uses the following stages:

- New
- In Progress
- Attestation
- Closed

When a control is created, the system sets the lifecycle to the New stage and sends an email to the first lifecycle assignee. When the user completes the task, the trigger moves the object to the next task and the next user. A user can add a comment with every transition. Transitions take place when users open a control object in the detail view and click Lifecycle > *<transition icon>*. The stage determines the transition icon that is displayed.

The following table summarizes how the system handles controls and sets the lifecycle assignee. The Transition icon column contains the name of the Lifecycle > *<transition icon>* in the control detail view that a user clicks to trigger the transition to the next stage.

*Table 29. Lifecycle process and stage owners for controls*

| Stage | Lifecycle assignee | Transition icon | Next stage | Next Status |
|---|---|---|---|---|
| New | Control Owner | **Start** | In Progress | In Progress |
| In Progress | Control Owner | **Submit for Attestation** | Attestation | Attesting |
| Attestation | Control Attester | **Send Back** | In Progress | Attest Rejected |
| Attestation | Control Attester | **Attest** | Closed | Closed |
| Closed | (not assigned) | **Re-Open** | In Progress | Re-Opened |

**Control notification**

The control notification sends an email to a lifecycle assignee when a control is created and for each transition in the control lifecycle. A transition occurs when a user clicks a transition icon (Lifecycle > **Start**, **Submit for Attestation** , **Send Back**, **Attest**, or **Re-Open**) in the control detail view.

The control notification is started by the control lifecycle trigger. The email notification contains the stage, status, due date, comment, and a link to the control.

The link to the control can either be to the detail page in OpenPages, or to the approval app, or to both. Which links to include is defined by the **AppData** field pick list on the control and controlled by the **Stage** field.

## Incident Lifecycle triggers

Triggers provide the transitions that move incidents through an investigation lifecycle. Lifecycles define the stages that an object type can follow. At each stage, the system:

- Identifies a lifecycle assignee
- Defines the actions available to move to a different stage
- Automatically sends an email to the new lifecycle assignee
- Defines other attributes that are related to the current stage

The lifecycle for incidents uses the following stages:

- New
- In progress
- Review
- Escalation
- Escalation review
- Closed

When an incident is created, the system sets the lifecycle to the New stage and sends an email to the first lifecycle assignee. When the user completes the task, the trigger moves the object to the next task and the next user. A user can add a comment with every transition. Transitions take place when users open an incident object in the detail view and click **Lifecycle** > **<transition icon>**. The stage determines the transition icon that is displayed.

The following table summarizes how the system handles incidents and sets the lifecycle assignee. The **Transition icon** column contains the name of the transition icon that displays in the incident detail view.

*Table 30. Lifecycle process and stage owners for incidents*

| Stage | Lifecycle assignee | Transition icon | Next stage | Next Status |
|---|---|---|---|---|
| **New** | Primary owner | **Start** | In Progress | In Progress |
| **In Progress** | Primary owner | **Send for Review** | Review | In Review |
| | | **Escalate** | Escalation | Escalated |
| **Review** | Reviewer | **Review Reject** | In Progress | Review Rejected |
| | | **Review Close** | Closed | Closed |
| **Escalation** | Business owner | **Send for Escalation Review** | Escalation Review | Escalation Review |
| | | **De-escalate** | In Progress | De-escalated |
| **Escalation Review** | Reviewer | **Escalation Review Close** | Closed | Escalated and Closed |
| | | **Escalation Review Reject** | Escalation | Escalation Review Rejected |
| **Closed** | None | **Re-open** | In Progress | Reopened |

## Questionnaire Assessment Lifecycle triggers

Questionnaires assessments are a means of gathering information from business users in the organization. Triggers provide the transitions that move questionnaire assessments through a lifecycle. Lifecycles define the stages that an object type can follow. At each stage, the system:

- Identifies a lifecycle assignee
- Defines the actions available to move to a different stage
- Automatically sends an email to the new lifecycle assignee
- Defines other attributes that are related to the current stage

The lifecycle is selected on the program. It can be:

- Two-stages: information gathering to closed
- Three-stages: information gathering to review to closed
- Four-stages: information gathering to review to approval to closed

When a program is launched, the system creates one questionnaire assessment object per employee, resource, process, subprocess, vendor, or engagement in the program. It sets the lifecycle to the information gathering stage and sends an email to the first lifecycle assignee. When the user completes the task, the trigger moves the object to the next task and the next user. A user can add a comment with every transition. Transitions take place when users work with questionnaire assessments in the questionnaire UI. Emails are sent at each transition except if the assignee remains the same. By default, emails are not sent when questionnaire assessments move to the closed stage.

The following table summarizes the lifecycles for questionnaire assessments. The **Transition icon** column contains the name of the icon in the questionnaire UI that a user clicks to trigger the transition to the next stage.

*Table 31. Lifecycle process for questionnaire assessments*

| Lifecycle | Stage | Transition icon | Next stage | Next Status |
|---|---|---|---|---|
| Two-stages | Information gathering | **Submit and Close** | Closed | Complete |
| Three-stages | Information gathering | **Submit** | Review | In Review |
| | Review | **Action** > **Reject** | Information gathering | Rejected |
| | | **Action** > **Approve and Close** | Closed | Complete |
| Four-stages | Information gathering | **Submit** | Review | In Review |
| | Review | **Action** > **Reject** | Information gathering | Rejected |
| | | **Action** > **Submit for Approval** | Approval | In Approval |
| | Approval | **Action** > **Reject** | Review | Approval Rejected |
| | | **Action** > **Approve** | Closed | Approved |

For questionnaire assessments, the underlying assets determine how the system sets the lifecycle assignees. The following table summarizes how lifecycle assignees are determined.

*Table 32. Lifecycle assignees for questionnaire assessments*

| Lifecycle | Stage | Resource | Process/ Subprocess | Employee | Vendor | Engagement |
|---|---|---|---|---|---|---|
| Two-stages | Information gathering | Primary owner | Owner | Employee account | Vendor owner | Engagement owner |
| | Closed | - | - | - | - | - |

| *Table 32. Lifecycle assignees for questionnaire assessments (continued)* | | | | | | |
|---|---|---|---|---|---|---|
| **Lifecycle** | **Stage** | **Resource** | **Process/ Subprocess** | **Employee** | **Vendor** | **Engagement** |
| Three-stages | Information gathering | Primary owner | Owner | Employee account | Vendor owner | Engagement owner |
| | Review | Program owner | Program owner | Employee manager | Vendor - Business Unit Owner | Vendor - Business Unit Owner |
| | Closed | - | - | - | - | - |
| Four-stages | Information gathering | Primary owner | Owner | Employee account | Vendor owner | Engagement owner |
| | Review | Business owner | Business owner | Employee manager | Vendor - Business Unit Owner | Vendor - Business Unit Owner |
| | Approval | Program owner | Program owner | Program owner | Program owner | Program owner |
| | Closed | - | - | - | - | - |

## Policy Import trigger

The Policy Import trigger imports Policy and Procedure content from a structured Microsoft Word document into IBM OpenPages with Watson Policy and Procedure fields by parsing the different sections of the document. It is triggered by checking in an attachment to the Policy object.

The trigger supports the Hybrid approach to Policy Management, It also supports updating the version number in the Docucentric approach when a new policy document is checked in. As part of the import process, the trigger also performs extensive validation to ensure that the structure of the Word document adheres to the defined Policy Template.

OpenPages with Watson or the customer can configure this component to behave for the customer methodology through registry and application text settings.

The IBM OpenPages Policy Management Policy Import Trigger has the following known limitations:

- Bulleted lists only support the disc and circle bullet format.
- Numbered lists only support decimal, upper-alpha, lower-alpha, upper-roman, and lower-roman.
- Symbol fonts are not supported. You can use the **Insert Symbol** option and select a symbol using normal font (for example, the copyright symbol).
- Wingding font is not supported.
- Cannot set shading from the **Shading** menu. Workaround: Use text highlighting to achieve a similar effect. (.doc only)
- Will not display the value of a FORMDROPDOWN. (.doc only)
- Ordered lists always use a period as the separator. For example, if a list item in the Word doc looks like "1)" then it will be "1." after the import.
- For `.doc`, the style of the list item marker will be inferred from the text content of the list. The marker's font family and font size will match the first piece of text in the list item. The marker will be bold, italic, and/or colored if all the text in the list item has that same styling.
- Images, Word Art, and diagrams are not supported.
- Does not support importing a Table of Contents.
- All underline styles show as single solid line

- Superscript/subscripts defined by within a style are not supported (.doc only). Workaround is: Apply sub/superscript from the Font menu instead of using a style.
- Formatting overrides that conflict with custom styles. For example, if custom style includes a Strong text format and the user manually un-bolds the text within the document, the text will show up bold per the Strong style. (.doc only)
- Tabs default to 4 spaces, which is not guaranteed to match the spacing in the document since tabs are based on positioning in the document. It is better to use indent when aligning content.
- Hanging indent (that is, First Line Indents) for lists is not guaranteed to line up perfectly due to the varying width of the list item markers.
- Within lists, mixing techniques for creating bullets, lists, and indentations will often result in items not being aligned correctly and incorrect numbering of items.
- Entering several carriage returns to create spacing will not render as extra spacing.
- Unsupported features:
  - Changes in Text Direction
  - Double Strike Through
  - Emboss, Engrave, Shadow text
  - Text Effects
  - Emphasis Marks
  - Custom Text Spacing
  - Shadowed borders
  - Ascending diagonal cell borders

## Policy Lock trigger

The Policy Lock trigger locks the Policy or the Policy and its components (Procedures, Attachments, Policy Review Comments) at different points in the Review and Approval Process. This trigger supports all three approaches to Policy Management: Datacentric, Hybrid, and Docucentric.

The Lock trigger supports two use cases:

- Locking Policy Attachments in support of a policy being put into a review and approval cycle to ensure that the policy content cannot be changed during approvals. (Applicable for Hybrid and Docucentric approaches.)
- Locking the entire Draft Policy hierarchy (Policy, Procedures, Attachments and Policy Review Comments) after the Policy has been given final approval and is ready for publishing. (Applicable for all three policy approaches.)

The customer can configure this component to behave as appropriate for the customer methodology using the registry and application text settings.

## Audit Risk Rating Computations trigger

The Audit Risk Rating Computations trigger calculates and maintains the Audit Inherent and Residual Risk Rating field values on the Risk object.

The RCSA Quantitative trigger and the RCSA Qualitative trigger apply to the Audit Risk Rating Computations trigger.

## Audit Close Automation trigger

The Audit Close Automation trigger assesses close readiness for each configured component of an audit. By default, the trigger is configured for the following object types: Audit, Audit Section, Workpaper, Finding, Audit Review Comment, Plan, and Timesheet.

When an instance of a configured object type is created or updated, the trigger evaluates all the criteria which are configured for that object type. If all the criteria have been met, then the trigger sets the Ready To Close field value to Yes. This field value is used by the Audit Close helper to determine if all of the audit components are ready to close.

Configured ready to close criteria categories include fields that are required, date fields that must be set to on or before today's date, date fields that must be set to values on or before other date field values, and user fields that cannot be set the same as other user fields.

## Model Scorecard triggers

Triggers on the Model Scorecard object calculate scores that are used to assign a tier to a Model. Model Scorecards are part of IBM OpenPages Model Risk Governance.

The triggers on the Model Scorecard object are evaluated if a Model Scorecard is created or if scoring input fields are updated. The triggers calculate scores and weighted scores for each input and calculate a score and a weighted score for each input category. Finally, the triggers calculate an overall score and assign a tier to the Model based on the overall score. The triggers are configured in registry settings and use weights and other values on Preference records whose Type is set to MRG.

## Exchange Rate trigger

The Exchange Rate Trigger recalculates the specified currency field value by using the nearest exchange rate based on the configured date field, instead of the latest exchange rate loaded in the system.

For Loss Events, the Estimated Gross Loss value is updated based on the exchange rate that is closest to the Discovery Date.

For Loss Impacts, the Estimated Loss and Actual Loss values are updated based on the exchange rate that is closest to the Occurrence Date.

For Loss Recovery, the Estimated Recovery Amount and Recovery Amount values are updated based on the exchange rate that is closest to the Received Date.

The `Trigger` Run field on Loss Impacts and Loss Recoveries is disregarded by the Exchange Rate trigger. If it is set to No, the Exchange Rate trigger still runs.

You can enabled and disable the Exchange Rate Trigger with the **Administration** > **Settings** > **Solutions** > **ORM** > **Triggers** > **Loss Events** > **FX Rate Adjuster** setting. The default is true (enabled).

# Chapter 8. Profiles

IBM OpenPages with Watson solutions consist of several profiles.

By default, for each solution, a master profile is provided that includes all the fields and configuration required for that solution. The following list displays the master profiles:


- "OpenPages VRM Master profile" on page 75 - IBM OpenPages Vendor Risk Management
- "OpenPages RCM Master profile" on page 75 - IBM OpenPages Regulatory Compliance Management
- "OpenPages MRG Master profile" on page 76 - IBM OpenPages Model Risk Governance
- "OpenPages MRG Model Risk Management" on page 76
- "OpenPages MRG Model Developer Owner" on page 76
- "OpenPages MRG Model Validation" on page 76
- "OpenPages FCM Master profile" on page 76 - IBM OpenPages Financial Controls Management
- "OpenPages ORM Master profile" on page 77 - IBM OpenPages Operational Risk Management
- "OpenPages PCM Master profile" on page 78 IBM OpenPages Policy Management
- "OpenPages ITG Master profile" on page 78 - IBM OpenPages IT Governance
- "OpenPages IAM Master profile" on page 79 - IBM OpenPages Internal Audit Management


When all OpenPages with Watson default solutions are installed, the solutions for OpenPages Master profiles are also included.

IBM OpenPages Operational Risk Management also includes the following profiles that are solution-specific:


- "ORM Operational Risk Team profile" on page 77
- "ORM Business User profile" on page 77
- "ORM Simplified User profile" on page 78
- "OpenPages FIRST Loss profile" on page 78


## OpenPages VRM Master profile

The OpenPages VRM Master profile includes the fields and configuration required for IBM OpenPages Vendor Risk Management.

This profile includes:

- Filters
- My Work tab, Dashboard tab, and all home page tabs
- Dependent fields and dependent pick lists
- Detail, Context, Folder, Overview, Filtered List, and List Views

Two additional profiles, VRM Vendor Manager and VRM Vendor, support this profile. The VRM Vendor Manager profile is intended for users who are responsible for managing vendors. The VRM Vendor profile is intended for users who act as vendor contacts and are responsible for answering questionnaire assessments.

## OpenPages RCM Master profile

The OpenPages RCM Master profile includes the fields and configuration required for IBM OpenPages Regulatory Compliance Management.

This profile includes the following components:

- My Work tab, Dashboard tab, and all home page tabs
- Dependent fields
- Detail, Context, Folder, Filtered List, and List Views

## OpenPages MRG Master profile

The OpenPages MRG Master profile includes the fields and configuration required for IBM OpenPages Model Risk Governance.

This profile includes the following components:

- My Work tab, Dashboard tab, and all home page tabs
- Dependent fields
- Detail, Context, Folder, Filtered List, and List Views

Subsets of this profile to use with a Model Owner, Model Executive, Model Reviewer, and other users are created during the implementation project.

## OpenPages MRG Model Risk Management

The OpenPages MRG Model Risk Management profile is part of IBM OpenPages Model Risk Governance.

The Model Risk Management profile is intended for model managers and model management business executives in the second line of defense. Users assigned to this profile have access to MRG-specific task views on the shared object types, Business Entity and Preference.

## OpenPages MRG Model Developer Owner

The OpenPages MRG Model Developer Owner profile is part of IBM OpenPages Model Risk Governance.

The Model Developer Owner profile is intended for model developers and model owners. Users assigned to this profile have access to MRG-specific task views on the shared object types, Business Entity and Preference.

## OpenPages MRG Model Validation

The OpenPages MRG Model Validation profile is part of IBM OpenPages Model Risk Governance.

The Model Validation profile is intended for model validators and reviewers. Users assigned to this profile have access to MRG-specific task views on the shared object types, Business Entity and Preference.

## OpenPages FCM Master profile

The OpenPages FCM Master profile includes the fields and configuration required for IBM OpenPages Financial Controls Management.

This profile includes the following components:

- Filters
- My Work tab, Dashboard tab, and all home page tabs
- Dependent fields and dependent pick lists
- Activity, Detail, Context, Folder, Overview, Filtered List, Grid view, and List Views

Subsets of this profile to use with a Process Owner, Control Tester, and other user are created during the implementation project.

## OpenPages ORM Master profile

The OpenPages ORM Master profile includes the fields and configuration required for IBM OpenPages Operational Risk Management.

This profile includes the following components:

- Filters
- My Work tab, Dashboard tab, and all home page tabs
- Dependent fields and dependent pick lists
- Activity, Detail, Context, Folder, Overview, Filtered List, and List Views

## ORM Operational Risk Team profile

The ORM Operational Risk Team profile includes the configuration required by a power user who uses most capabilities of IBM OpenPages with Watson but does not have read access to library IDs and object status fields.

A user of this profile can complete the following events:

- Maintain Processes
- Manage Risk & Control Libraries
- Perform RCSA Scoping
- Perform and oversee the RCSA process
- Administer, review, and oversee Loss Event
- Define and capture KRIs
- Manage Issue and Action closure
- Coordinate Scenario Analysis

This profile includes the following components:

- Filters
- My Work tab, Dashboard tab, and all home page tabs
- Dependent fields and dependent pick lists
- Activity, Detail, Context, Folder, Overview, Filtered List, and List Views

## ORM Business User profile

The ORM Business User profile includes fields and configuration required by a risk manager to use in the operations of the business. This user is an active participant in most Operational Risk Management activities.

A user of this profile can modify the following items:

- Log a Loss Event
- Perform RCSA Scoping
- Approve Risk Assessments
- Capture Key Risk Indicators
- Manage Issue and Action closure
- Participate in scenario workshops

This profile includes the following components:

- Filters

- My Work tab, Dashboard tab, and all home page tabs
- Dependent fields and dependent pick lists
- Activity, Detail, Context, Folder, Overview, Filtered List, and List Views

## ORM Simplified User profile

The ORM Simplified User profile allows a user to focus on loss events, KRI value capture, and issue management.

This profile includes the following components:

- Filters
- My Work tab, Dashboard tab, and all home page tabs
- Dependent fields and dependent pick lists
- Activity, Detail, Context, Folder, Overview, Filtered List, and List Views

## OpenPages FIRST Loss profile

The OpenPages FIRST Loss profile includes the fields and configuration that facilitate the loading of FIRST Loss data through the IBM OpenPages FastMap feature to IBM OpenPages Operational Risk Management.

Users of this profile can edit all fields in FIRST Loss objects so that data can be loaded. This profile should be assigned only to users who are responsible for loading FIRST Loss data through FastMap. All other users should have read-only access to FIRST Loss objects.

Note that it is not necessary to assign this profile to a user. Instead, you can configure the FastMap spreadsheet containing FIRST Loss data to load using the OpenPages FIRST Loss profile.

This profile includes the following features:

- My Work tab, Dashboard tab, and all home page tabs
- Dependent pick lists
- Detail, Context, Folder, Overview, Filtered List, and List Views

## OpenPages PCM Master profile

The OpenPages PCM Master profile includes the fields and configuration required for IBM OpenPages Policy Management.

This profile includes:

- Filters
- My Work tab, Dashboard tab, and all home page tabs
- Dependent fields and dependent pick lists
- Computed fields
- Activity, Detail, Context, Folder, Overview, Filtered List, Grid Views, and List Views

Subsets of this profile that are appropriate for a Compliance Program Manager, Privacy Officer, and other users are created during the implementation project.

## OpenPages ITG Master profile

The OpenPages ITG Master profile includes the fields and configuration required for IBM OpenPages IT Governance.

This profile includes:

- Filters
- My Work tab, Dashboard tab, and all home page tabs
- Dependent fields and dependent pick lists
- Computed fields
- Activity, Detail, Context, Folder, Overview, Filtered List, Grid Views, and List Views

Subsets of this profile that are appropriate for an IT library administrator, IT director, and other users are created during the implementation project.

## OpenPages IAM Master profile

The OpenPages IAM Master profile includes the fields and configuration required for IBM OpenPages Internal Audit Management.

This profile includes:

- Filters
- My Work tab, Dashboard tab, and all home page tabs
- Dependent fields and dependent pick lists
- Computed fields
- Activity, Detail, Context, Folder, Overview, Filtered List, Grid Views, and List Views

Subsets of this profile that are appropriate for a lead auditor, audit director, and other user profiles are created during the implementation project.

# Chapter 9. Role templates

A role template defines the privileges that a user is granted to access each object type. IBM OpenPages with Watson solutions include several role templates. Role templates give Application Permissions and grant access to features and functions. They also give Object ACLs (RWDA).

When permission rights are assigned to a solution role template, those rights are also assigned to the All Modules Master template.

By default, two role templates are included with each solution. The template called All Permissions provides administrative rights and permissions to all object types that are available for the solution. The template called All Data - No Admin provides permissions to all object types that are available for the solution but does not provide administrative rights.

For more information on permissions provided with role templates, see “Role template permissions” on page 82.

## List of role templates

IBM OpenPages with Watson solutions inprefereclude several role templates.

The following role templates are delivered with the solutions:

*Table 33. Role templates*

| **Name** | **Description** |
|---|---|
| Modules Master - All Permissions | Full R/W/D/A access to all enabled-by-default objects for all Solutions. Full admin rights. |
| Modules Master - All Data - Limited Admin | Full R/W/D/A access to all enabled-by-default objects for all Solutions. No admin rights except those associated with workflows, files and folders. |
| FCM - All Data - Limited Admin | Full R/W/D/A access to all default FCM objects. No admin rights except those associated with workflows, files and folders. |
| FCM - All Permissions | Full R/W/D/A access to all default FCM objects. Full admin rights. |
| IAM - All Data - Limited Admin | Full R/W/D/A access to all default IAM objects. No admin rights except those associated with workflows, files and folders. |
| IAM - All Permissions | Full R/W/D/A access to all default IAM objects. Full admin rights. |
| ITG - All Data - Limited Admin | Full R/W/D/A access to all default ITG objects. No admin rights except those associated with workflows, files and folders. |
| ITG - All Permissions | Full R/W/D/A access to all default ITG objects. Full admin rights. |
| Loss Event Entry | Role template used by the Loss Event Entry application. |
| MRG - All Data - Limited Admin | Full R/W/D/A access to all default MRG objects. Limited admin rights. |
| MRG - All Permissions | Full R/W/D/A access to all default MRG objects. Full admin rights. |
| MRG - Model Developer Owner | Used by model owners and developers.<br>This role template is similar to the Model Risk Management role template except that no write access is granted to the Review object.<br>Most admin application permissions are not granted. |

| *Table 33. Role templates (continued)* | |
|---|---|
| **Name** | **Description** |
| MRG - Model Risk Management | Used by model risk managers (second line of defense).<br>Read, write, and associate access rights are granted to MRG object types. Write access is denied to the two shared object types, Preference and Business Entity.<br>Most admin application permissions are not granted. Delete access is not granted to any object types. |
| MRG - Model Validation | Used by model validation users.<br>Read, write, and associate access rights are granted to a subset of MRG object types including Model, Register, Review, Change Request, and Challenge. Write access is denied to other MRG object types. Write access is denied to shared object types, Preference and Business Entity.<br>Most admin application permissions are not granted. Delete access is not granted to any object types. |
| ORM - All Data - Limited Admin | Full R/W/D/A access to all default ORM objects. No admin rights except those associated with workflows, files and folders. |
| ORM - All Permissions | Full R/W/D/A access to all default ORM objects. Full admin rights. |
| [ORM] Business User | ORM role template for users who log loss events, perform RCSAs, approve risk assessments, capture KRIs, manage issue and action closure, and participate in scenario workshops. |
| [ORM] Operational Risk Team | ORM role template for users who maintain Process, Risk, and Control libraries, scope RCSAs, perform and oversee the RCSA process, perform loss event administration, define and capture KRIs, manage issue and action closure, and coordinate scenario workshops. |
| [ORM] Simplified User | ORM role template for users who need minimum access for their work on loss events, KRI value capture, and issue management. |
| PCM- All Data - Limited Admin | Full R/W/D/A access to all default PCM objects. No admin rights except those associated with workflows, files and folders. |
| PCM - All Permissions | Full R/W/D/A access to all default PCM objects. Full admin rights. |
| RCM - All Data - Limited Admin | Full R/W/D/A access to all default RCM objects. No admin rights except those associated with workflows, files, and folders. |
| RCM - All Permissions | Full R/W/D/A access to all default RCM objects. Full admin rights. |
| RCM - Subscriber | Read access to all default RCM objects. No admin rights except those associated with workflows, files and folders. |
| VRM - All Data - Limited Admin | Full R/W/D/A access to all default VRM objects. No admin rights except those associated with workflows, files and folders. |
| VRM - All Permissions | Full R/W/D/A access to all default VRM objects. Full admin rights. |

## Role template permissions

Each role template defines access permissions that are enabled for each object type.

For each solution, a role template called All Permissions is provided. It includes full administrator rights. It also provides full read, write, delete, associate (RWDA) access to all object types that are included in the solution.

In addition, each solution includes a role template called All Data - No Admin. The template provides no administrator rights except for object types that are associated with files and folders. The templates provide full read, write, delete, associate (RWDA) access to all default object types enabled by default for the solution. For more information on access permissions that are granted to object types in role templates, see “Object type permissions assigned by role templates” on page 83.

## Object type permissions assigned by role templates

A role template defines the read, write, delete, and associate access to object types enabled in each solution.

When permission rights are assigned to a role template, those rights are also assigned to the All Modules Master template.

The following permissions describe the rights that are assigned to object types in role templates:

*Table 34. Object type permissions*

| Permission | Name | Description |
|---|---|---|
| R | Read | Groups or users are granted the right to browse and view the details of objects. |
| W | Write | Groups or users are granted the right to create or modify objects within the selected folder. They cannot delete objects. |
| D | Delete | Groups or users are granted the right to delete objects within the folder structure. |
| A | Associate | Groups or users are granted the right to create associations between objects. |

Each solution includes two master templates: the All Permissions template and All Data - No Admin template.

# Chapter 10. Sample workflows in GRC Workflow

Sample workflows are provided with OpenPages to get you started with the GRC Workflow feature.

## List of sample workflows in GRC Workflow

You can use the sample workflows as delivered or modify them to meet your requirements. They can also be used as templates and learning tools for your own workflows.

The following sample workflows are included in OpenPages:

- Finding workflow
- Issue review workflow
- Action item approval workflow
- Loss event review workflow
- Workpaper workflow
- MRG workflows
- RCM workflows

### Finding workflow

The Finding sample workflow uses the Finding System Task view and depends upon the out-of-the-box schema for Finding and related object types.

In this workflow, note the following key elements:

- The cancellation path

  If a stage is declined, the workflow returns to the Finding Preparation stage. In your own workflow, you might choose this route or choose to go back to the immediately preceding stages. Plan the paths through the workflow in both a forward and backward direction.

- Task overrides

  The task overrides for each stage define the Key Fields that are listed. The user guidance text is from the Task View itself. With this method, the Key Fields change with each stage and are specific to a stage.

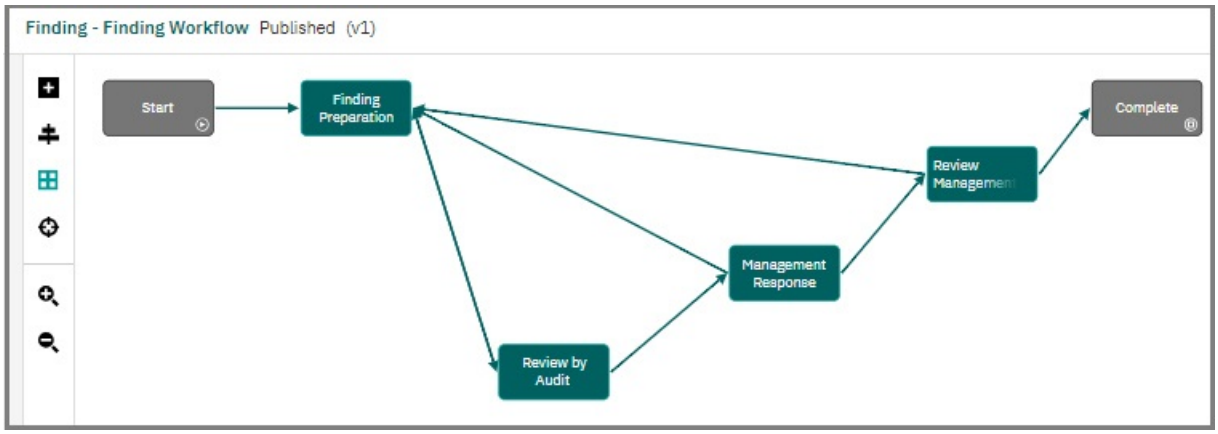


*Figure 1. Finding sample workflow*

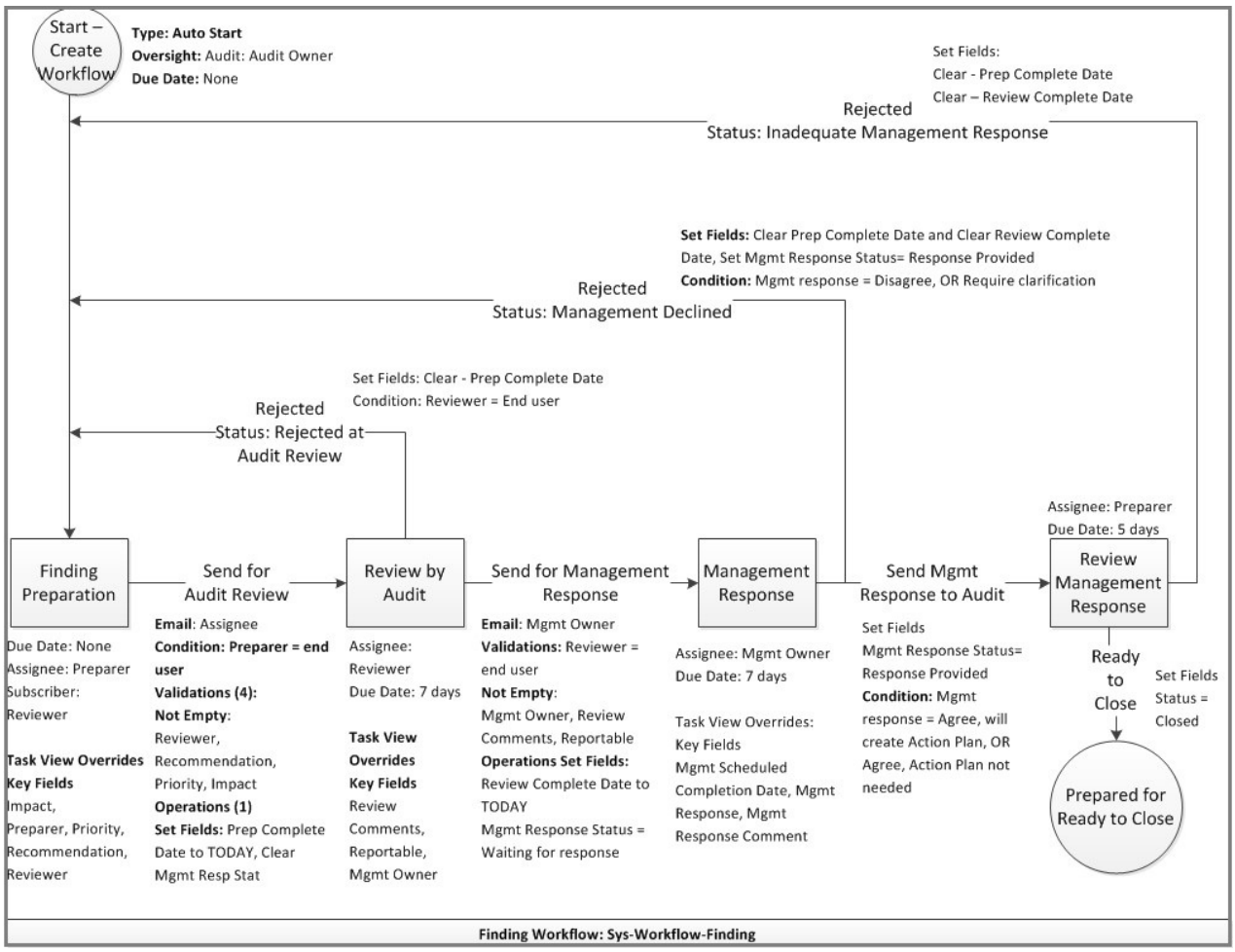


*Figure 2. The specification for the Finding sample workflow*

### Issue review workflow

In an Issue Management and Remediation (IMR) framework, you can effectively document, monitor, remediate, and audit issues.

Issues are items that are identified against the documented framework and are deemed to negatively affect the ability to accurately manage and report risk. In its lifecycle, an issue can have one of two states: Open or Closed.

When an issue is created, the Issue Review workflow starts automatically. The workflow sets the Status of the issue to Open and the Original Due Date to the due date that was entered when the issue was created. An email is sent to the Issue Owner, informing them that an issue is assigned to them. The due date for the task is set to 15 days prior to the issue's Due Date.

To resolve the issue, the Issue Owner establishes and records the appropriate actions.

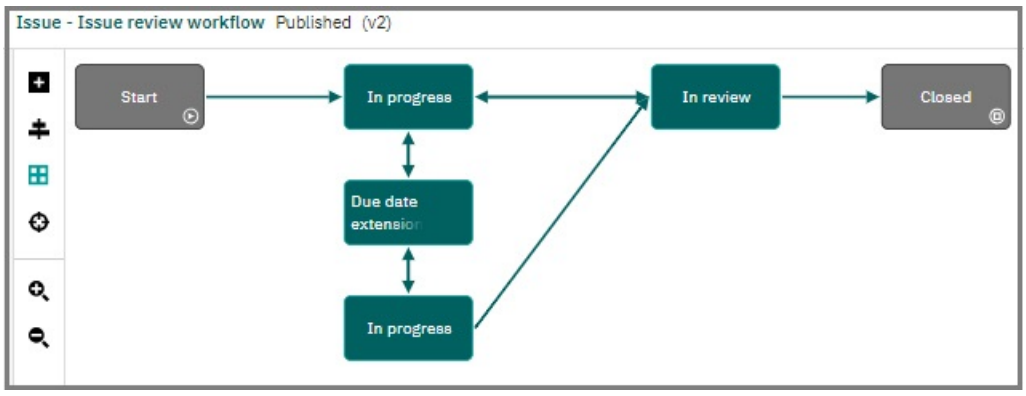


*Figure 3. Issue Review sample workflow*

The Issue Owner can request a due date extension at any time during the issue lifecycle by setting the Requested Due Date and selecting **Actions** > **Request due date change**. The Issue Approver is notified of this request via email. The approver can approve or reject the request. If approved, the issue's Due Date is set to the requested due date.

The Issue Owner can submit the issue for review by selecting **Actions** > **Submit for review**. The workflow performs the following validations:

- All action items under the issue are closed.
- The Issue Conclusion field is populated.
- The Issue Type field is populated.

If any of the validations fails, the workflow prevents the Issue Owner from submitting the issue for review. If all the validations pass, the Issue Approver is notified of the request via email. This task due date is set to the issue's Due Date. If rejected, the Issue Owner is notified of the rejection via email. The Issue Owner can make updates and then re-submit the issue for review. If the issue is approved, the issue's Status is set to Closed.

The issue can be re-opened by starting the Issue Review workflow.

#### Action Item Approval workflow

When an action item is created, the Action Item Approval workflow starts automatically. An email is sent to the Action Item Assignee informing them that an action item is assigned to them. The due date for the task is set to 7 days prior to the action item's Due Date. When an action item is complete, the assignee selects **Actions** > **Submit for Approval**. The workflow then does the following actions:

- Copies the value in the Issue Owner field of the parent issue to the action item's Issue Owner for Approval field.
- Sets the action item's Status field to Awaiting Approval.
- Sends an email to the Issue Owner informing them that an action item is waiting for their approval.

The Issue Owner reviews the action item, and then approves or rejects the closure of the Issue. The due date for the task is set to the action item's Due Date.

If the Issue Owner selects **Actions** > **Approve**, the workflow completes the following actions:

- Sets the Status field to Closed.
- Sets the Approve Reject field to Approve.
- Sets the Actual Completion Date to today's date.

If the Issue Owner selects **Actions** > **Reject**, the task is re-assigned to the Action Assignee. The workflow completes the following actions:

- Sets the Status field to Open.
- Sets the Approve Reject field to Reject.

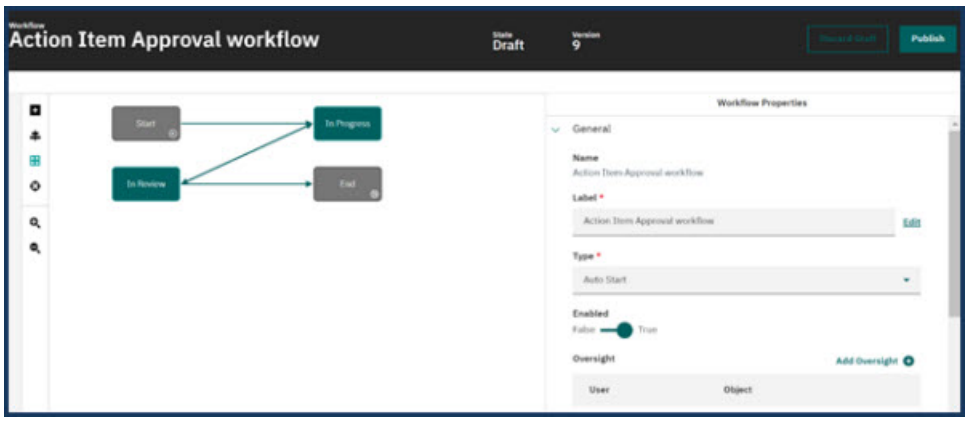


*Figure 4. The Action Item example workflow*

### Loss Event Review workflow

The Loss Event sample workflow is similar to the configurable lifecycle for Loss Events.

In this workflow, take note of the following elements:

- Different paths based on an amount value

  The workflow provides different levels of approval (approval level 1 and approval level 2) based on the gross loss value of the loss event.
- Use of preference objects

  Approval level 1 and approval level 2 are retrieved from the Preference object. There are different approvers based on the division where the loss event occurred. Study this example if you want to learn more about how to implement a Preference object in workflows.

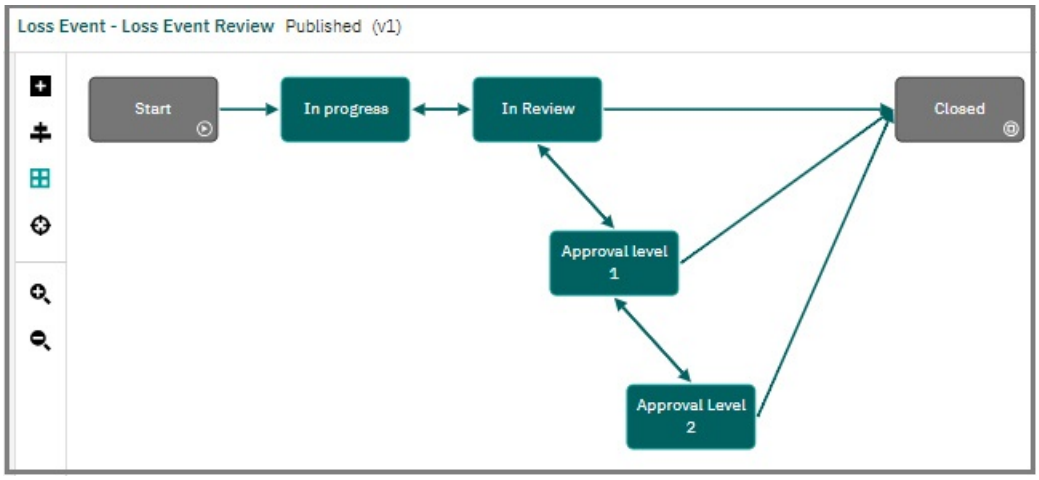


*Figure 5. Loss Event sample workflow*

### Workpaper workflow

The Workpaper sample workflow uses the Workpaper System Task view and depends upon the out-of-the-box schema for Workpaper and related object types.

There are multiple types of Workpapers, for example Notification Letters and Test Evidence. However, the sample workflow is high level and not defined for one specific type. In the Workpaper workflow you create, you will likely define it for a specific type of Workpaper, in which case, you can choose to have separate workflows for each type or one workflow with separate branches with conditions that specify the type.

In this workflow, take note of the following elements:

- Who can view the **Actions** button

  The final two forward actions, Send for Review and Approve and Complete, are restricted to specific users, the preparer and the reviewer, respectively. These actions are displayed only to them. For all other users, there is no action on the **Actions** button. When you encounter a situation like this, you can add an explanation to the user guidance for the stage that explains why there is no option on the **Actions** button.

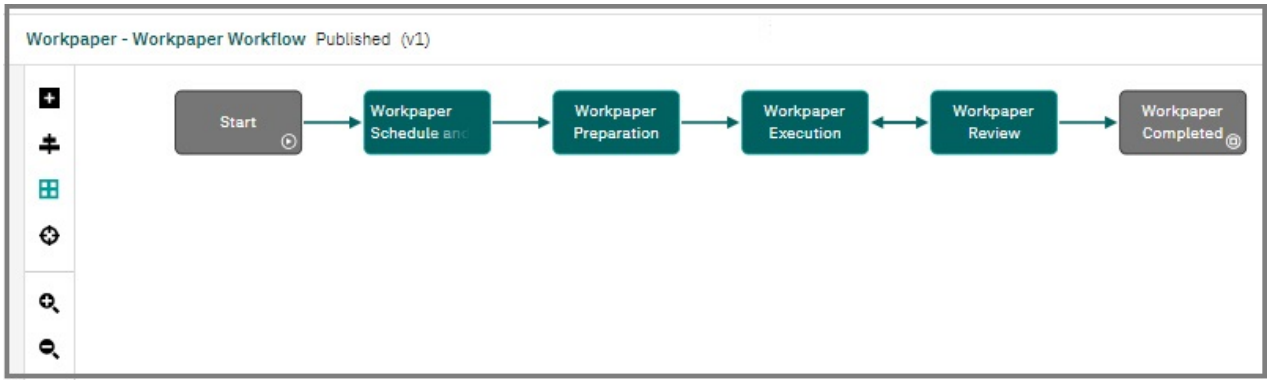


*Figure 6. Workpaper sample workflow*

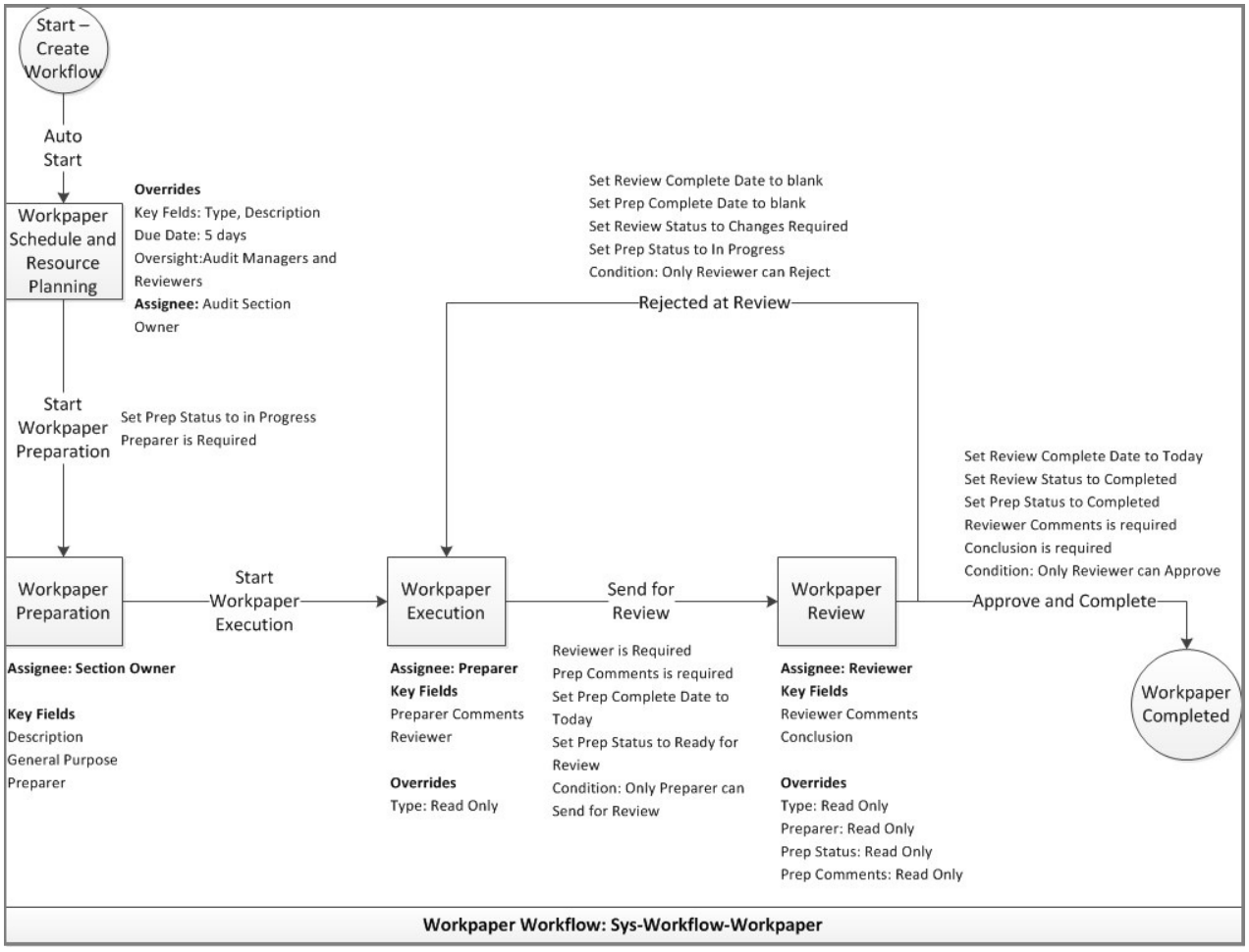


*Figure 7. The specification for the Workpaper sample workflow*

### MRG workflows

Numerous sample workflows are provided to facilitate use cases for IBM OpenPages Model Risk Governance:

- Model Candidate workflow

  This workflow allows a user to add a Model object to the inventory as a candidate. The Model candidate is submitted for Approval as either a Model or a Non Model. The approver can perform an override of the candidate proposal. After a model candidate has been confirmed as a Model, the Model Development and Documentation process can begin.
- Model Development and Documentation workflow

  This workflow takes a model from the completion of the candidate process through to approval for deployment. It consists of four stages and multiple sub-workflows that involve various stakeholders:

  – Definition and planning (model owner)
  – Development and documentation (model developer)
  – Pre-implementation review (model validation)
  – Approval (head of model development)
- Model Tier Scorecard workflow

  This workflow performs a model tier assessment on the model, the results of which are used to assign a tier to the model. The Model Scorecard triggers and the values in Preference records are used to compute scores and tier. At the end of the workflow the scores and tier are copied up to the parent Model.
- Pre-implementation Review workflow

  This workflow is performed at the completion of the model development and documentation workflow. The Review Planning team that is identified on a Preference object is responsible for completing this review. This workflow is also used for conducting reviews after the model is in production.
- Model Attestation workflow

  This workflow is typically started by an MRG administrator and records a model owner's response to a request for attestation.
- Challenges workflow

  This workflow is started against a Model, one of its Usages, or a Review. The result can be no action or changes to a Model or Usage.
- Change Requests workflow

  This workflow provides governance for changes to Models. A workflow can be based upon changes in the business or to the data and other inputs to a Model. Users can accept, approve, or reject the change and decide whether it is material or not.
- Metric Value workflow

  This workflow automates the Breach Status calculation and facilitates performance monitoring of deployed models. This is critical to the ability to proactively decide to make changes to the model or its usages or to remove a model from production. Typically, an MRG administrator creates Metric Value objects, a Metric Capturer provides the latest data for the Metric, and the Metric Owner reviews and approves it. The workflow calculates breach status for the Metric and copies the most recent Metric Value information to the Metric.
- Model Decommission workflow

  This workflow is used to remove a Model from production and retire it.

**RCM workflows**

OpenPages includes sample workflows for processing Regulatory Events. The workflows can be modified without the need for development resources or coding. Workflows can be tailored to match an organization’s methodology for processing alerts published by regulatory agencies.

- Trigger Change - Regulatory

This workflow creates a Regulatory Change record and associates the record to a Regulatory Event when the conditions of a rule from the Rules Engine are met that indicate the Regulatory Event addresses a regulatory change, such as a proposed or final rule published in the Federal Register. The workflow also populates certain fields on the created Regulatory Change record, including categorizing the Regulatory Change record as **Regulatory Change**. This workflow enables the association of multiple Regulatory Change records to a Regulatory Event so that multiple users can analyze the impact of the Regulatory Event on their particular areas of responsibility within the organization.

Separate workflows are available for TRRI Regulatory Events and WK Regulatory Events.

- Trigger Change - Horizon Scanning

  This workflow creates a Regulatory Change record and associates the record to a Regulatory Event when the conditions of a rule from the Rules Engine are met that indicate the Regulatory Event addresses an issue other than a regulatory change, such as a speech or enforcement action published by a regulator. The workflow also populates certain fields on the created Regulatory Change record, including categorizing the Regulatory Change record as **Horizon Scanning**. This workflow enables the association of multiple Regulatory Change records to a Regulatory Event so that multiple users can analyze the impact of the Regulatory Event on their particular areas of responsibility within the organization.

  Separate workflows are available for TRRI Regulatory Events and WK Regulatory Events.

- Regulatory Change Review Workflow

  When a Regulatory Change record is created, this workflow starts. The workflow guides the user through the processing of a Regulatory Event. The user determines the applicability of the Regulatory Event that is associated with the Regulatory Change record and determines the impact of the Regulatory Event. The user also has the option to create and assign Regulatory Tasks to users within RCM for actions that need to be taken to respond to the Regulatory Event. When Regulatory Tasks are assigned to users, this workflow cannot be closed until all related Regulatory Tasks have been completed.

- Regulatory Task Workflow

  When a Regulatory Task record is created, this workflow starts. The workflow alerts the owner of the Regulatory Task that a record has been created and assigned to them. After the user completes the assignment that is provided in the Regulatory Task record and clicks **Task Completed**, the workflow changes the status field to **Completed** and populates the date that the task was completed.

- Send Email Notification

  This workflow can be used to send mail notifications to users who are named within a rule that is created in the Rules Engine.

  Separate workflows are available for TRRI Regulatory Events and WK Regulatory Events.

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