WorkflowJAIL™

Business Intelligence Reports

Administration and Set-up Guide v1.0

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Revision History

Name	Date	Reason for Changes
Joel Basart	March 11, 2014	Start Guide content.
Joel Basart	May 30, 2014	First draft complete.
Joel Basart	Sept 12, 2014	Minor changes to material.
Joel Basart	March 20, 2015	Added Data Model section, updated other material.
Joel Basart	June 2015	Report models, update.

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About this Guide

This guide describes both pre-defined and custom BI reporting, including dashboards, BI Publisher, data models, and creating your own reports.

Before Getting Started

Prior to performing any procedures, the following is recommended:

- Java Knowledge.
- Familiarity with BI Publisher.
- Oracle Documentation – BI Publisher.
- Review and familiarize yourself with each section of this guide.
- Print and organize all the chapters relevant to your system.
- Use your printed guide as a checklist.

Typographical Conventions

The following typographical conventions are used:

Convention	Purpose
Bold	Executable names, including titles of items you must select. For example: • Click a **button** on the screen with the mouse. • Press a **key.** • Type **information** in a field. • Select a **function** from a pull-down menu.
Italics	Important notes
Title Case	Proper names Names of Workflow features, for example, 'Toolbar,' 'Header' block, 'Schedule Inquiry' button.
Other	Symbols are utilized to illustrate a procedure or other relevant information.

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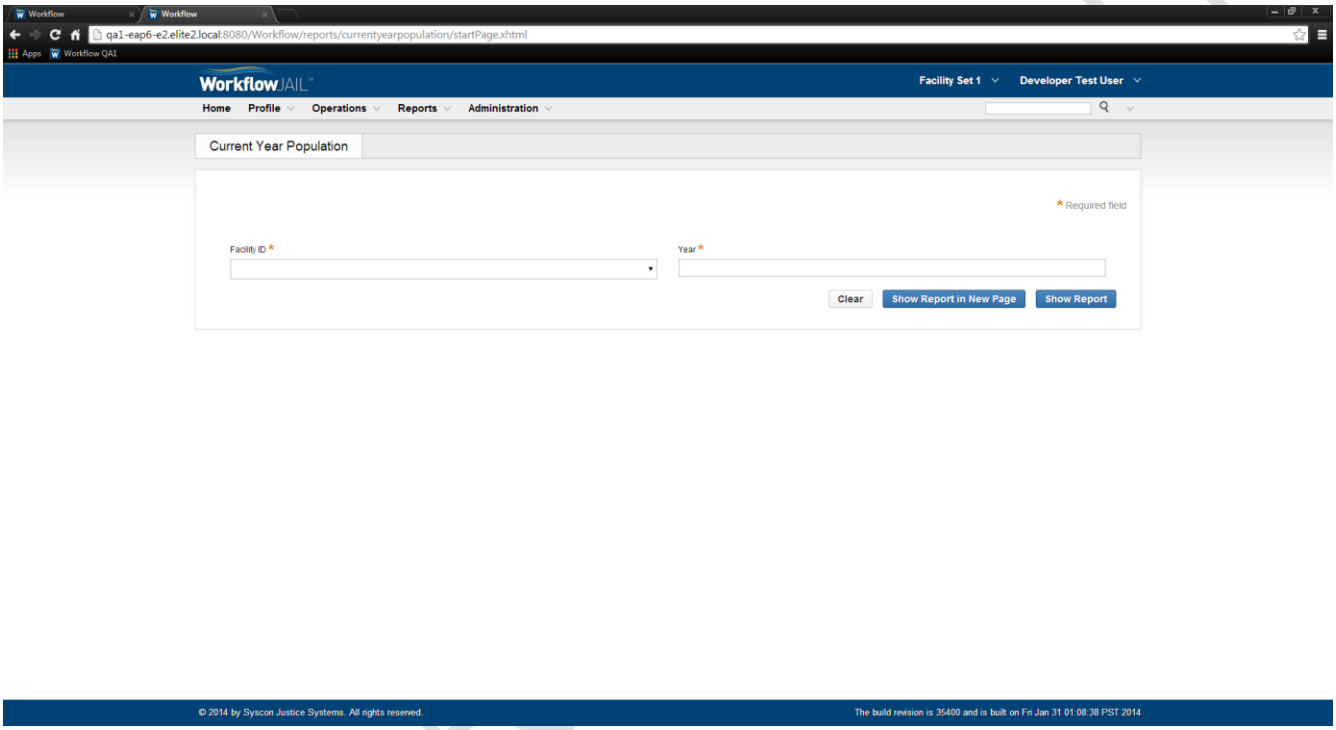
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Overview

Workflow includes pre-defined reports and dashboards as well as customized output giving you the ability to create your own reports and dashboards to help generate and analyze facility information.

Pre-defined Reports and Dashboards

We have bundled a suite of pre-defined reports and dashboards into Workflow under the Report menu and separated them by **Operations** or **Administration**.



You can use these reports and dashboard for many of the day-to-day activities at your facility. Anything that is not included in this bundle can be created using our **Business Rules Management System** tools.

BI Publisher

BI Publisher is an Oracle report generation tool that uses data from data models to make custom reports and dashboards.

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Pre-defined Reports and Dashboards

Reports and dashboards use live representation of data in a web browser for a given facility. They enable an at-a-glance view of critical or key facility-wide information.

These pre-defined reports and dashboards are derived from data models and rendered to the WorkflowJAIL UI using the BI Publisher tool).

Data models are the key to enable the structuring and extraction of data for report and dashboard generation.

List of Pre-defined Reports

The following are the out-of-the box reports available from the Workflow Reports menu.

Business Area	**Report**
Housing/Facility Counts	• Active Inmate list • Facility Housing Status Report • Housing Location Report • Internal Location Count Report • Location Bar Code Report • Unclassified Inmate List
Legals	• Legal Status Report • Intermittent Schedule report • Release List Report • Key Dates Report
Movements	• Active Out Inmates • Court Schedule Report (print Friendly) • Court Schedule Report • Daily External Movements • Daily Schedule Report • Known location history report
Shift Logs/Case Notes	• Case Note History • Shift Log History
Visitation	• Daily Vision Schedule Report
Custom	• Active Out Inmates • Grievances Report • Incident Report • Linked Reference Domain Values Report • Property Details at Location • Property Items Summary
Programs and Offerings	• Programs Offering and Allocations Report • Program Participation Report • Program Catalogue

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Security Threat Groups	• Gang History Report
Trust	• Inmate Account Balance Report
Embedded Reports (Inmate Profile)	• Booking Summary Report • Print Wristband (Bar Code) • Print Wristband (QR Code)
Workflow Administration Console (WAC) Only	
Reference Domains	• Linked Reference Domain Values • Reference Domain Linkage Report • Reference Domain Values Report
Custom Fields	• Custom Fields Report
Audit	• Vine log Report • Revision Audit Report (supervision, Cautions, Facility)

Current Pre-defined Dashboards

Facility

Current population information for a facility. Includes Gender, Legal Status, Security Level, Race, and Imprisonment Status.

Intake Summary (by Facility)

Number of inmates and their processing stage during intake. Based on your defined Intake process.

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Custom BI Reports and Dashboards

Instead of using the pre-defined reports and dashboards outlined earlier in this document, you are able to create your own using the BI Publisher tool.

Business Intelligence

Business intelligence (**BI**) is a set of theories, methodologies, architectures, and technologies that transform raw data into meaningful and useful information. BI handles large amounts of unstructured data to help make interpreting this data an easy process.

Our custom reports and dashboards use Business Intelligence rules that are part of a Business Rules Engine.

*Note: These custom reports are in addition to the default reports included in Workflow. For more information on these pre-defined reports, see Pre-defined **Reports** earlier in this guide.*

Data Models

Custom reports use a data source to populate the report, and this data is defined in a data model.

A data model contains a set of instructions for BI Publisher to retrieve and structure data for a report. Data models reside as separate objects in the catalog.

These data models can contain multiple data fields that are structured in relation to each other, parameters with lists of values, bursting definitions and other properties that define how data is provided for the report. The same data model can be re-used for multiple reports and dashboards.

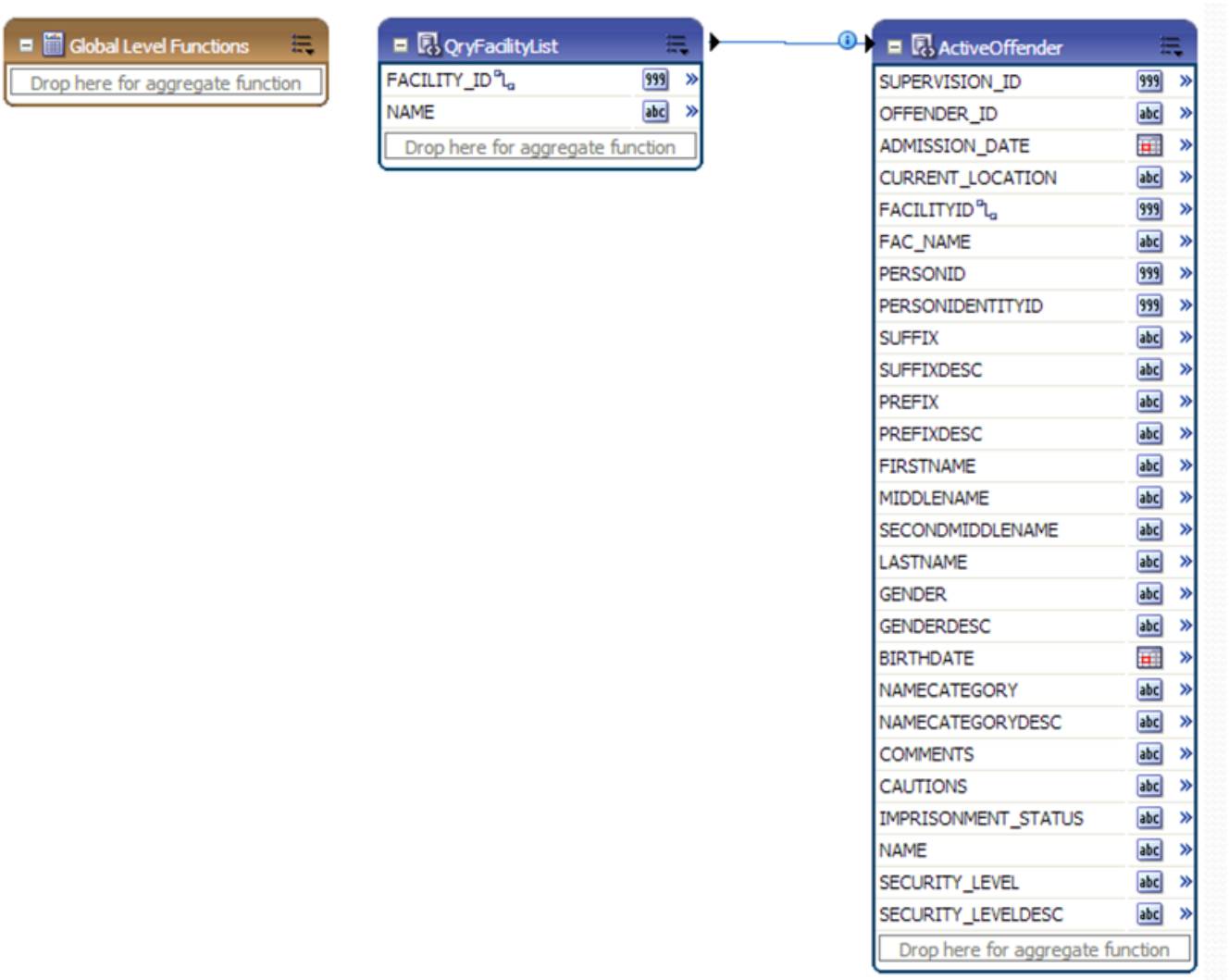
We have created rich data models so that you are able to create virtually any report possible for your facility.

A rich data model typically includes all data that can be used for any created report allowing you to easily select the data you required and generate output.

A **Data Set** contains the logic to retrieve data from a single data source. A data set can retrieve data from a variety of data sources (for example, a database, an existing data file, a Web service call to another application, or a URL/URI to an external data provider). A data model can have multiple data sets from multiple sources.

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For example:



*Note: See **BI Publisher** for more information.*

There are several concepts that are used with BI Publisher that are important to understand:

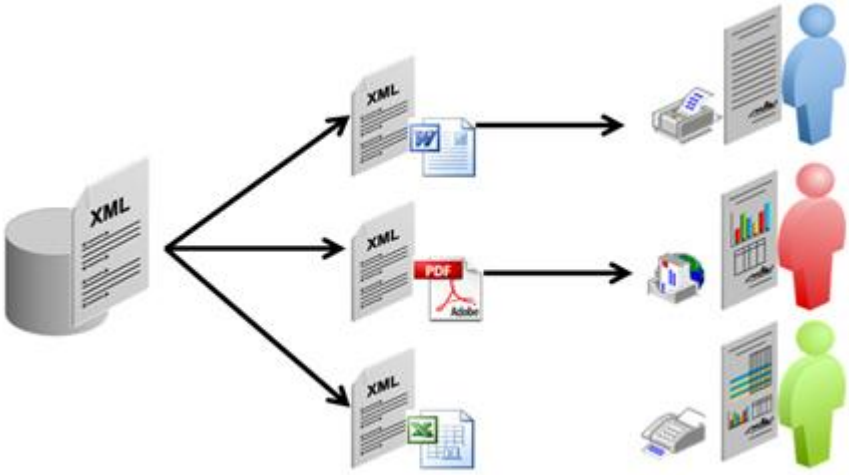
Interactivity - reports and dashboards that contain clickable parts displaying more detail to the userReport interactivity is called drill-down reporting; this feature is enabled by a **DrillDownReporting** plugin.

For example, clicking an inmate record in a report can display a sub-report for that inmate (element); such a sub-report can be rendered three ways, one of which is a popup – handy! The other possibilities are a new browser window or in a frame on current page view of the report.

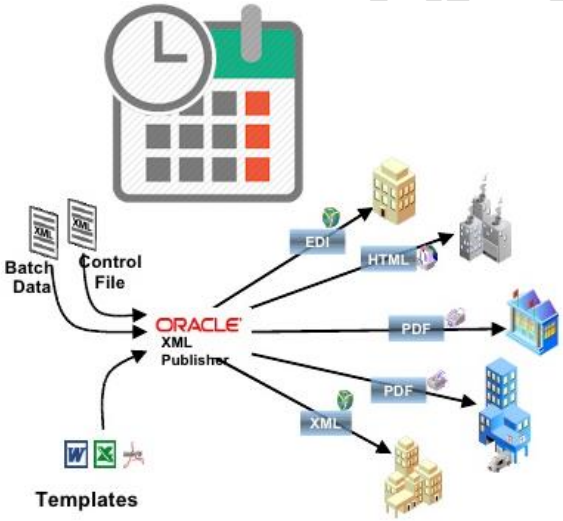
For dashboards—the interactivity is clickable data; this feature is inherent to dashboards, as they are HTML output (rendered in the browser). For example, on the Intake Dashboard, the user may click on the number of offenders overdue for property registration; this would allow the user to see which tasks (inmates) are stuck at this stage of the intake process.

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Bursting: breaking apart a report into sub-reports and outputting the parts to different formats; and finally distributing the outputs to different recipients as set up by the System Administrator for users.



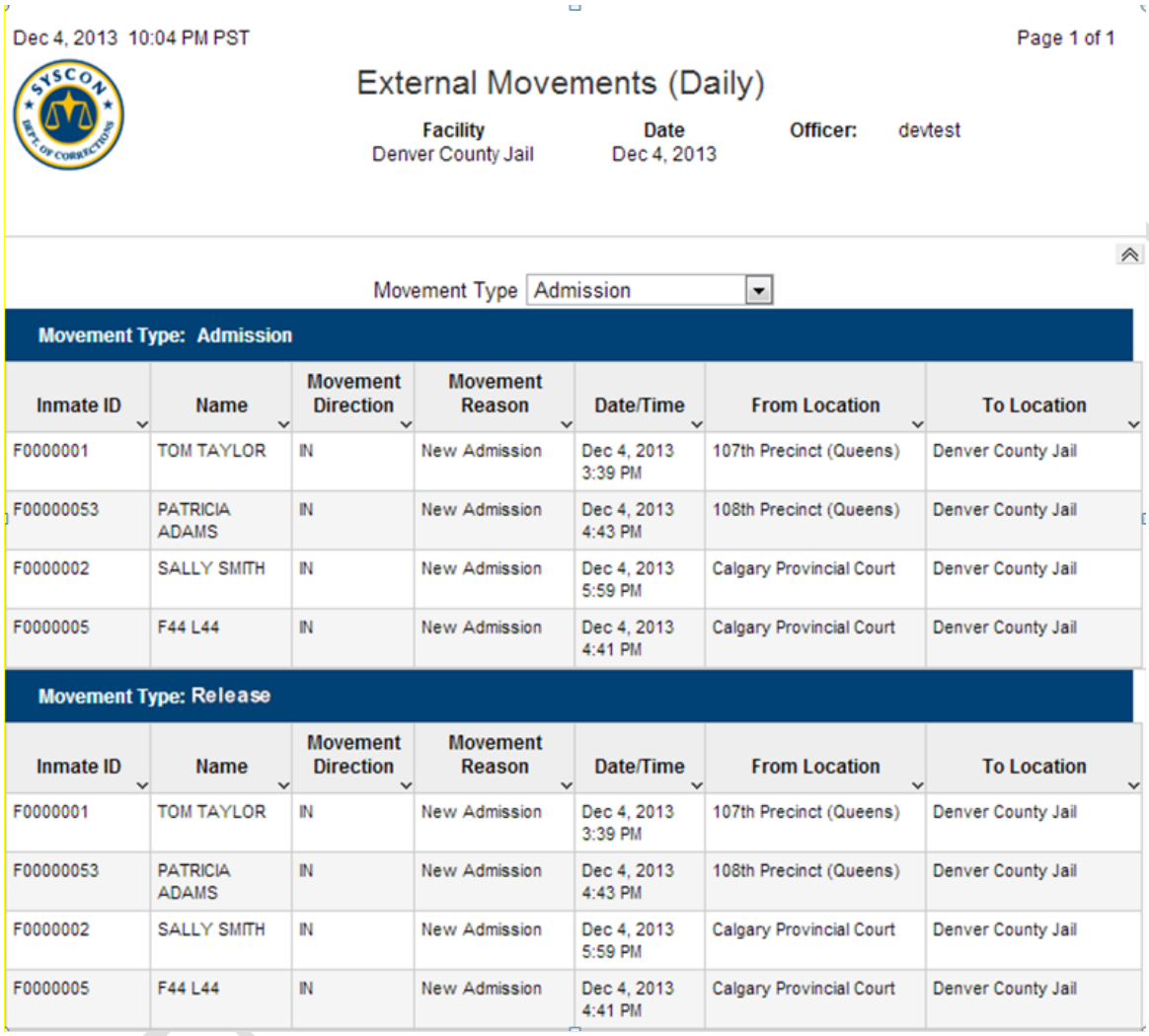
Scheduling report generation and distribution: daily reports can be scheduled to run at specified times of the day and sent to specific recipients as set up by the System Administrator for users.



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Grouping: grouping data elements into a section; enabling the repeating of that section in a report (set up by the System Administrator for users).

Groups, or repeating sections, repeat the components within the section of the layout based on the occurrence of an element in the data. Data may also be grouped at the data model level.



Dec 4, 2013 10:04 PM PST Page 1 of 1

External Movements (Daily)

Facility	Date	Officer:	devtest
Denver County Jail	Dec 4, 2013		

Movement Type: Admission

Movement Type: Admission

Inmate ID	Name	Movement Direction	Movement Reason	Date/Time	From Location	To Location
F0000001	TOM TAYLOR	IN	New Admission	Dec 4, 2013 3:39 PM	107th Precinct (Queens)	Denver County Jail
F00000053	PATRICIA ADAMS	IN	New Admission	Dec 4, 2013 4:43 PM	108th Precinct (Queens)	Denver County Jail
F0000002	SALLY SMITH	IN	New Admission	Dec 4, 2013 5:59 PM	Calgary Provincial Court	Denver County Jail
F0000005	F44 L44	IN	New Admission	Dec 4, 2013 4:41 PM	Calgary Provincial Court	Denver County Jail

Movement Type: Release

Inmate ID	Name	Movement Direction	Movement Reason	Date/Time	From Location	To Location
F0000001	TOM TAYLOR	IN	New Admission	Dec 4, 2013 3:39 PM	107th Precinct (Queens)	Denver County Jail
F00000053	PATRICIA ADAMS	IN	New Admission	Dec 4, 2013 4:43 PM	108th Precinct (Queens)	Denver County Jail
F0000002	SALLY SMITH	IN	New Admission	Dec 4, 2013 5:59 PM	Calgary Provincial Court	Denver County Jail
F0000005	F44 L44	IN	New Admission	Dec 4, 2013 4:41 PM	Calgary Provincial Court	Denver County Jail

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Data Models

How to Model Data

1. Launch the **Data Model Editor**.
2. Set **properties** for the Data Model (optional).
3. Create the **Data Sets** for the Data Model.
4. Define the data **output structure** (optional).
5. Define the **parameters** to pass to the query, and define **lists of values** for users to select parameter values (optional).
6. Define **event triggers** (optional).
7. **Test** your data model and **add sample data**.
8. Add a **bursting definition** (optional).

Current Data Models

Workflow comes with a series of pre-configured models. Any authorized user can make or edit layouts based on these modules. These are available upon installation of in BI Publisher, and can be found in the folder: \\Shared Folders\Reports

When new layouts need to be created, you can confirm the availability of each data set needed against the models provide with Workflow.

Audit

1. **Login Attempt Audit**

   Key Data Sets: Login ID, UserLogEvent, EventDateTime

   Parameters: UserID, Fac_Set, Officer (for limiting access to the user's facility set only)

2. **Revision Audit Report –** Lists of edited cautions, facilities or supervision by user.

   Key Data Sets: ServiceEntityName, RevisionType (Reason)

   Parameters: None.

3. **User Page Audit -** For conducting audits of which inmates were viewed by a user.

   Key Data Sets: UserID, ViewedPageInfo, InmateFirstName, InmateLastName,

   Parameters: None.

4. **VIN_LOG_MESSAGE_REPORT –** List of VINE messages, by inmate.

   Key Data Sets: TransactionStatus, ErrorMsg (Error Message), SupervisionID

   Parameters: None.

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Custom

1. **Grievances Receipt –** For creating receipt that list the grievance's details, proving the data is in the system. This model also supports listing the custom field entry for active grievances.

   Key Data Sets: CCFID (For custom fields), CCF_COL

   Parameters: Officer (for login), GrievancesID (All listed grievances) [note: does not perform facility set check]

2. **Gang History Report –** Filters the report based on user's permission (facility sets) and shows the inmate's location (based on lowest-known active location in the internal location hierarchy) for each active inmate involved in an STG.

   This report includes mugshots for each inmate that has one on file.

   Key Data Sets: InmateName, Gang_Name, Gang_SetName, Mem_Status (Inmate's member status with the gang), Image (Blob object),

   Parameters: PI_Gang (Gang Name), PI_GangSet, PI_Status (Gang Status), Param_Facility_ID, Fac_Set (User's facility set), Officer (user), all four levels in the internal location hierarchy, Level_Wing_ID, LEVEL_UNIT_ID, LEVEL_ROOM_ID, & LEVEL_BED_ID.

3. **Incident Report** – Model of all incidents, allowing for information on the additional persons involved, charges, as well as the ability to bring in images associated with the incident.

   Parameters: Incident_ID, Officer (user) [note: does not perform facility set check]

Custom Fields

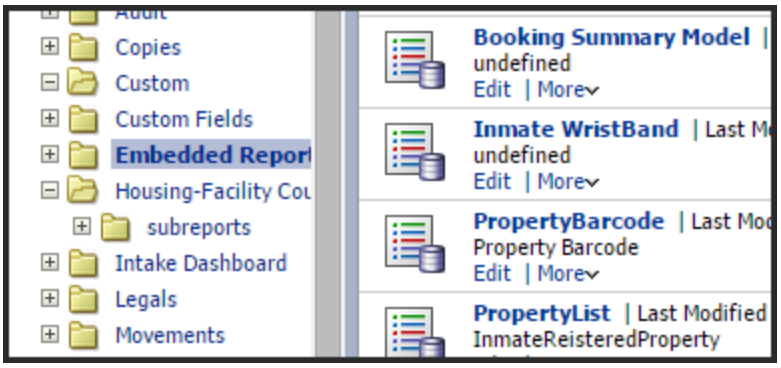
1. **Custom Fields Report** [sic] – This model lists the name, label, type, classification, as well as Mandatory and Active fields, for the custom fields (CFs) used in each entity ("entity" can be loosely described as module or screen, such as "Case Note", "Visit" or "OIC Hearing").

   Key Data Sets: F_CCF_Custom's DTOBinding (Entity), Name, Label, Type, Classification, Mandatory, Active.

   Parameters: None.

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Embedded Reports [sic]



Embedded reports do not appear in the main reports menu in Workflow.

1. **Booking Summary Model** – Retrieves information across the inmate's full demographic information, including image, other identifies. Also collects data on the inmate's case details, bail details, and supervision.

   Key Data sets: This model includes over 100 data sets. SupervisionID, OffenderID, PersonID, PersonIdentityID, MarkCategoryDesc (description of physical marks), LocationCityName (Address), Image, Ethnicity, Race, Height, Religion, EyeColor, Height, Comments, Contract_Person_ID, CautionID, CourtIssueDate, MovementReason.

   Parameters: Refresh, Officer, SupervisionNumber, OffenderNumber

2. **Inmate Wristband** – the inmate demographics needed to create a unique wristband. The barcode and QR code fonts are attached at the Layout level.

   Key Data sets: Name, Image, Result, HeightFeet, HeightInches (this can hold metric numbers), DateOfBirth, Race.

   Parameters: Officer, Officer ID

3. **Property Barcode** – the property demographics needed to create a unique code.

   Key Data sets: Container_ID, Facility_ID,Barcode, ItemTypeDesc, ItemSubTypeDesc, Seal

   Parameters: Property_ID.

4. **Property List** – the details of any selected property item.

   Key Data sets: Offender_ID, Admission_Date, Current_Location, Gender, Comments, Property_ID, ItemType, AllowedInCell (Is the property allowed in the inmate's cell), Make, Model, Serial, ContainerType.

   Parameters: Officer, OffenderNumber.

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Model	Parameters Used by the Model				
	Officer	Facility Set	User ID	Supervision#	Offender #
Audit	-	-	-	-	-
Login Attempt Audit	Y	Y	Y		
Revision Audit					
User Page Audit -					
VIN_LOG_Message -					
Custom	-	-	-	-	-
Grievances Receipt -	Y				
Gang History -	Y	Y			
Incident Report [sic] -	Y				
Custom Fields	-	-	-	-	-
Custom Fields Report [sic] -					
Embedded Reports	-	-	-	-	-
Booking Summary Model -	Y			Y	Y
Inmate Wristband -	Y				
Property Barcode -					
Property List -	Y				Y
Housing	-	-	-	-	-
Active Inmates List –	Y	Y			
Court List –	Y	Y			
Daily External Movements –	Y	Y			
Facility Housing Status –	Y	Y			
Internal Location Count –		Y			
Location Bar Code Report [sic] –	Y	Y			
Unclassified Inmates List –	Y	Y			

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Model	Parameters Used by the Model				
	Officer	Facility Set	User ID	Supervision#	Offender #
Intake Dashboard	-	-	-	-	-
dibmodel **–**		Y			
Legals	-	-	-	-	-
Intermittent Sentence… -	Y	Y			Y
Key Dates -	Y	Y		Y	
Legal Status -	Y	Y			
Movements	-	-	-	-	-
TBD					
Programs-and-Services	-	-	-	-	-
TBD					
Property	-	-	-	-	-
Property Details at Location	Y	Y		Y (as Inmate)	
Property Item	Y	Y			Y
Reference Domain	-	-	-	-	-
Linked Reference Domain Values	Y				
Reference Domain Linkage	Y				
Reference Domain Values	Y	Y			
Security-Threat-Group	-	-	-	-	-
Gang History Report	Y	Y		(by Gang)	
Trust	-	-	-	-	-

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Model	Parameters Used by the Model				
	Officer	Facility Set	User ID	Supervision#	Offender #
TBD					
Visitation	-	-	-	-	-
TBD					

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BI Publisher

Business Intelligence Publisher is a report generation tool that imports data from data models to generate custom reports. It separates the creation of data from the process of formatting it for your usage and can merge multiple data sources into a single output.

It provides a single, Web-based platform for authoring, managing, and delivering interactive reports, dashboards, and all types of highly formatted documents.

There are multiple output types that include: PDF, RTF, Excel, PowerPoint, and HTML. HTML output is used with Dashboards.

Using BI Publisher

Rich data models are used to generate customized reports using BI Publisher.

Steps:

1. Select your data.
2. Define the output type.
3. Define your layout.
4. Save and publish.

Layout

The BI Publisher Layout Editor offers a WYSIWIG, drag and drop interface for creating dynamic HTML output that supports interaction in a browser.

It also lets you create pixel perfect reports in PDF, RTF, Excel, PowerPoint, and HTML.

Dozens of chart types are available and charts are dragged and dropped into reports.

The layout editor can be interactive, for example, when using drill-down reports.

Plugins

The ability to add custom JavaScript plugins to our reports means powerful flexibility.

Plugins can be custom or JavaScript libraries such as D3, Arbor, Google or Oracle's own.

If it can be coded with Javascript, it can probably be added as a plugin to a report.

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Drill-Down Reporting

A drill-down report is a "report within a report".

Click an element in the master report to see a sub-report specific to that element.

We have custom developed three ways to present drill-down reports:

- in a new browser window
- in a frame in the same page shared by the main report
- in a pop-up that floats over the main report and can be manually repositioned.

For example, the Intake Dashboard relies on a drill-down plugin to show details specific to the segment of the bar chart you click on.

The method used here is a frame that shares the same page as the main report.



Inmate ID	First Name	Last Name	Supervision ID	Gender	Facility	Status	Task Name
F0000002	BRIDGE	BRIDGE	13-58011	Female	Denver County Jail	Reaching Threshold	Classification
F0000002	SALLY	SMITH	13-33093	Female	Edmonton Remand Centre	Reaching Threshold	Classification
F0000002	SALLY	SMITH	13-98607	Female	Denver County Jail	Reaching Threshold	Classification

Images

For another example, the daily court schedule report relies on a plugin to show thumbnail offender images on each row.

Creating Reports

1. Launch the **Create Report** guide to select a data source, and create a basic report. You can create a simple layout using the guide or add the layout later.

2. Edit or create a new **layout**.

3. Configure the **properties** for the layout.

4. Configure **parameters** for the report.

5. Configure **report properties**.

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Glossary

Term	Definition
Business Intelligence	A set of theories, methodologies, architectures, and technologies that transform raw data into meaningful and useful information. BI handles large amounts of unstructured data to help make interpreting this data an easy process.
BI Publisher	An Oracle report generation tool that uses data from data models to make custom reports and dashboards.
Drill-down reporting	Reports and dashboards containing clickable parts that display more detail.
Data Model	A data model contains a set of instructions for BI Publisher to retrieve and structure data for a report. Data models reside as separate objects in the catalog.
Data Set	A data set contains the logic to retrieve data from a single data source. A data set can retrieve data from a variety of data sources (for example, a database, an existing data file, a Web service call to another application, or a URL/URI to an external data provider). A data model can have multiple data sets from multiple sources.
Function	
Grouping	Grouping data elements into a section; enabling the repeating of that section in a report.
Trigger	A trigger checks for an event. When the event occurs the trigger runs the PL/SQL code associated with it. The data model editor supports before data and after data triggers. Event triggers consist of a call to execute a set of functions defined in a PL/SQL package stored in an Oracle database.
Variable	

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