

# Kiuwan Report Widget Library

This page describes the widgets available in the report widget library.

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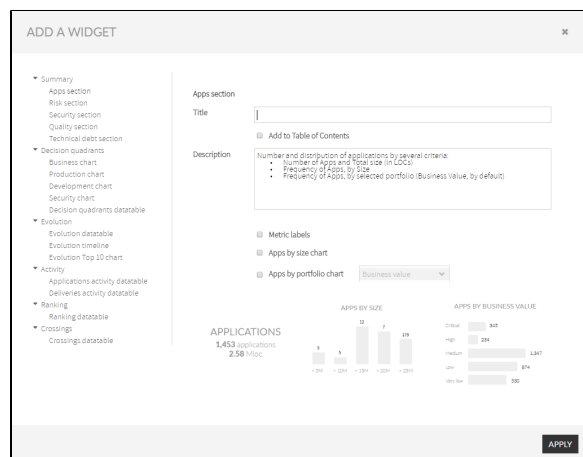
## Information about the widget library

Kiuwan provides a library of widgets that you can use to build [custom reports](#).



Visit [How to create a report](#) to learn how to access the library.

You select any of them, configure their specifics properties and **Add** them to the report.



Most of the available widget share some common characteristics:

Characteristic	Description
<b>Title / Add to Table of Contents</b>	<p>Every widget will be presented as a page of the report.</p> <p>The title lets you provide a string (a title) that will identify the report page.</p> <p>You will then decide either this title appears or not in the Table of Contents of the report.</p>

<b>Description</b>	A text you provide to explain the data displayed by the widget.
<b>Specific properties</b>	Depending on the widget, you can select additional properties to decide the degree of detailed information that will be printed.



Below you can find available widgets grouped by category.

- [Summary](#)
- [Decision Quadrants](#)
- [Evolution](#)
- [Activity](#)
- [Ranking](#)
- [Crossings](#)

## Summary Group

**Summary widgets** display global (aggregated) information about application metrics.

Available widgets:

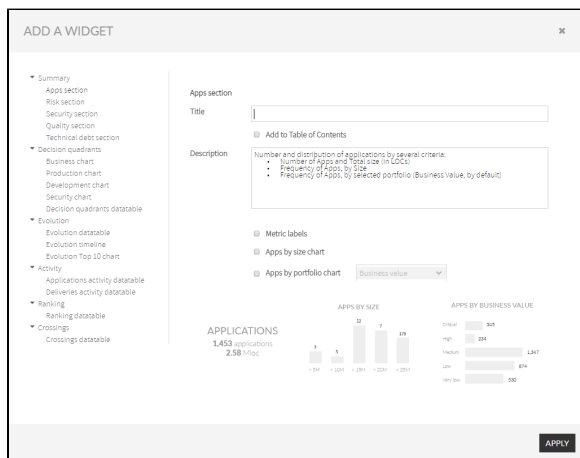
- Apps Section
- Risk Section
- Security Section
- Quality Section
- Technical Debt Section

For a complete understanding of Kiuwan Indicators, refer to [Security and Quality Indicators](#).

## Apps Section

The **Apps Section** widget includes summary data about the number and distribution of applications by several criteria:

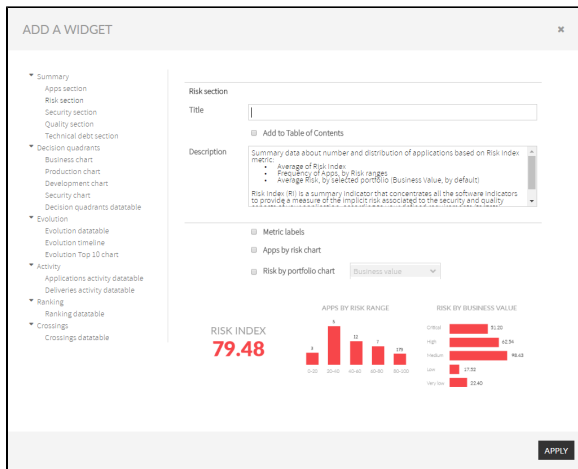
- Number of Apps and Total Size (in Millions of LOCs)
- Number of Apps, grouped by Size
- Frequency of Apps, grouped by selected portfolio (Business Value, by default)



## Risk Section

The **Risk Section** widget includes summary data about the number and distribution of applications based on the Risk Index metric:

- Average of Risk Index
- Number of Apps, grouped by Risk ranges
- Average Risk by selected portfolio values (Business Value, by default)

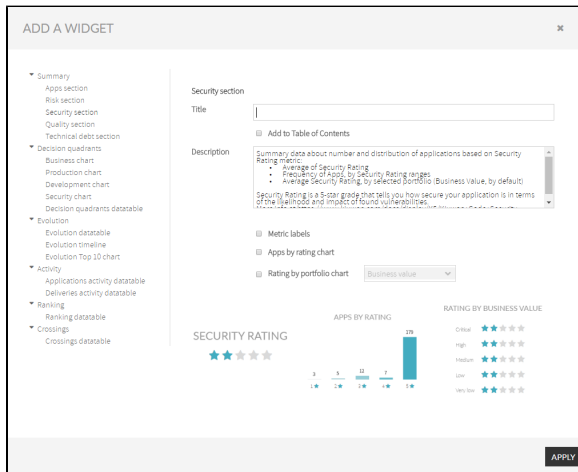


## Security Section

The **Security Section** widget includes summary data about the number and distribution of applications based on Security Rating metric:

- Average of Security Rating
- Number of Apps, grouped by Security Rating ranges
- Average Security Rating by selected portfolio values (Business Value, by default)

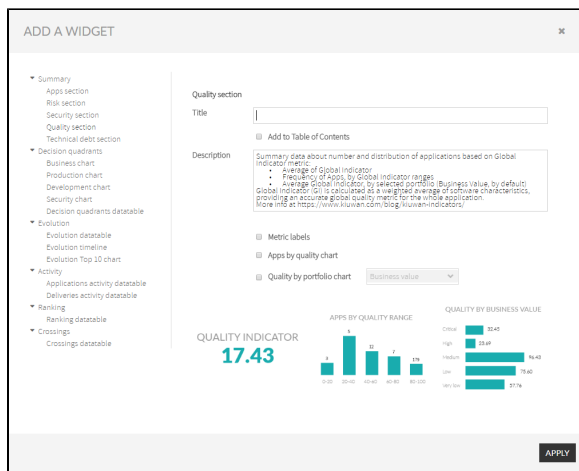
Please visit [Kiuwan Code Security](#) for further information.



## Quality Section

The **Quality Section** widget includes summary data about the number and distribution of applications based on Global Indicator metric:

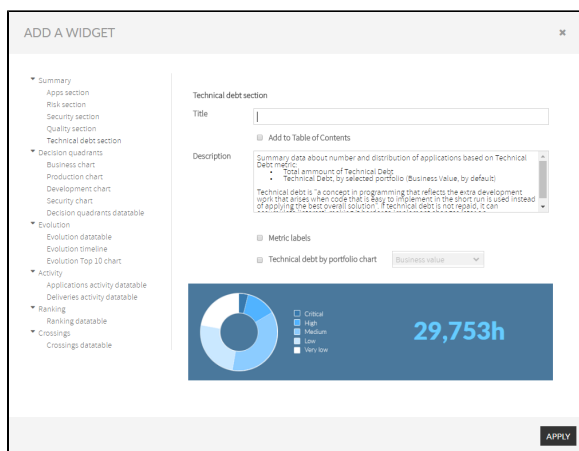
- Average of Global Indicator
- Number of Apps, grouped by Global Indicator ranges
- Average Global Indicator by selected portfolio values (Business Value, by default)



## Technical Debt Section

The **Technical Debt** widget includes summary data about the number and distribution of applications based on the Global (quality) Indicator metric:

- The total amount of Technical Debt
- Distribution of Technical Debt by selected portfolio values (Business Value, by default)



## Decision Quadrants Group

The Decision Quadrants widgets represent graphically where your applications are depending on their business value, failure probability, maintenance risk, and security risk.

Available widgets:

- Business chart
- Production chart
- Development chart
- Security chart
- Metrics
- Decision quadrants database

For a full understanding of Decision Quadrants, please visit [Decision quadrants](#).

## Business Chart

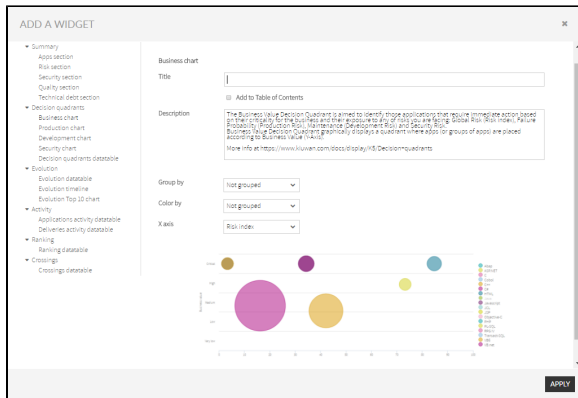
The **Business Chart** widget includes a Business Value Decision Quadrant in your report.

The Business Value Decision Quadrant is aimed to **identify those applications in your portfolio that require immediate action** based on their criticality for the business and their exposure to any of the risks you are facing:

- Global Risk (Risk index),

- Failure Probability (Production Risk),
- Maintenance (Development Risk) and
- Security Risk.

The **Business Chart** widget graphically displays a quadrant where apps (or groups of apps) are placed according to Business Value (Y-Axis).



The X-Axis can be customized to display the available types of Risks:

- Risk Index (default value)
- Failure Risk
- Maintenance Risk
- Security Risk

Please visit [Decision quadrants](#) for an explanation of different Risk indexes.

Points in the displayed graphic can be customized (by **Group by** selector) to represent:

- Individual applications (setting Group By to "Not grouped")
- Groups of applications (grouped by any of the available portfolios in **Group by** selector)

In addition, every point has two main characteristics:

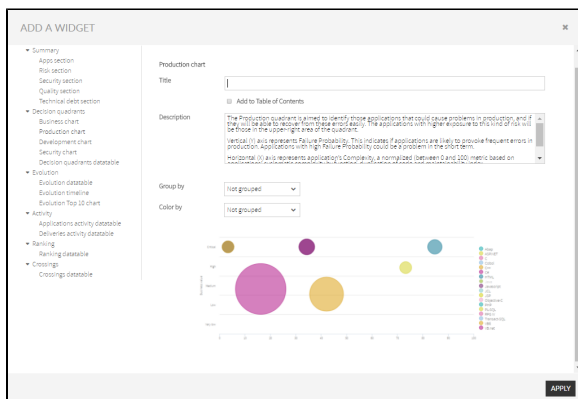
- Diameter (proportional to size in Locs)
- Color (the portfolio value the app belongs to. Please note that this option is only available when **Color by** selector has been set to any to the available portfolios)

## Production Chart

The **Production Chart** widget includes a Production Decision Quadrant in your report.

The Production Quadrant is aimed to identify those applications in your portfolio that could cause problems in production, and if they will be able to recover from these errors easily.

The applications with higher exposure to this kind of risk will be those in the upper-right area of the quadrant.



The Vertical (Y) axis represents Failure Probability. This indicates if applications are likely to provoke frequent errors in production. Applications with high Failure Probability could be a problem in the short term.

The Horizontal (X) axis represents the application's Complexity, a normalized (between 0 and 100) metric based on applications' cyclomatic complexity by function, duplication of code and maintainability index.

The Production Chart Widget graphically displays a quadrant where apps (or groups of apps) are placed according to the above-mentioned axis.

Refer to [Decision quadrants](#) for an explanation.

Points in the displayed graphic can be customized (by **Group by** selector) to represent:

- Individual applications (setting Group By to "Not grouped")
- Groups of applications (grouped by any of the available portfolios in **Group by** selector)

In addition, every point has two main characteristics:

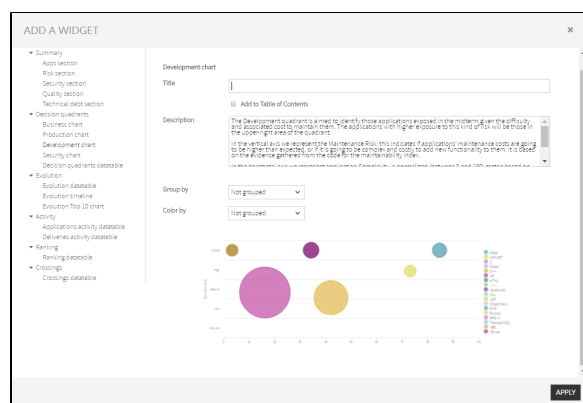
- Diameter (proportional to size in Locs)
- Color (the portfolio value the app belongs to. Please note that this option is only available when **Color by** selector has been set to any to the available portfolios)

## Development Chart

The **Development Chart** widget includes a Development Decision Quadrant in your report.

The Development quadrant is aimed to identify those applications in your portfolio exposed in the midterm, given the difficulty and associated cost to maintain them.

The applications with higher exposure to this kind of risk will be those in the upper-right area of the quadrant.



The vertical axis represents the Maintenance Risk: this indicates if applications' maintenance costs are going to be higher than expected, or if it is going to be complex and costly to add new functionality to them. It is based on the evidence gathered from the code for the maintainability index.

The horizontal axis represents the application Complexity: a normalized (between 0 and 100) metric based on applications' cyclomatic complexity by function, duplication of code and maintainability index.

The Development chart Widget graphically displays a quadrant where apps (or groups of apps) are placed according to the above-mentioned axis.

Please visit [Decision quadrants](#) for an explanation.

Points in the displayed graphic can be customized (by **Group by** selector) to represent:

- Individual applications (setting Group By to "Not grouped")
- Groups of applications (grouped by any of the available portfolios in **Group by** selector)

Additionally, every point has two main characteristics:

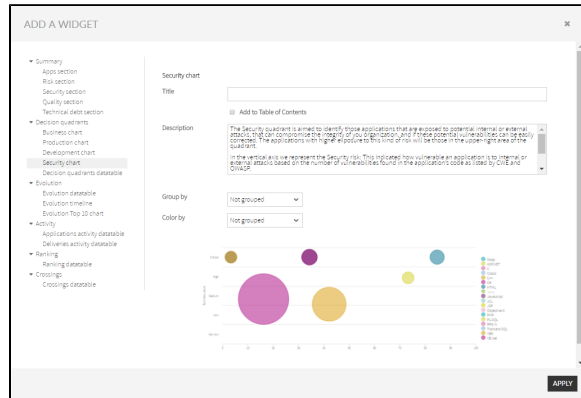
- Diameter (proportional to size in Locs)
- Color (the portfolio value the app belongs to. Please note that this option is only available when **Color by** selector has been set to any to the available portfolios)

## Security Chart

The **Security Chart** widget includes a Security Decision Quadrant in your report.

The Security quadrant is aimed to identify those applications in your portfolio that are exposed to potential internal or external attacks, that can compromise the integrity of your organization, and if these potential vulnerabilities can be easily corrected.

The applications with higher exposure to this kind of risk will be those in the upper-right area of the quadrant.



In the vertical axis, we represent the Security risk: This indicates how vulnerable an application is to internal or external attacks based on the number of vulnerabilities found in the application's code as listed by CWE and OWASP.

In the horizontal axis, we represent application Complexity, a normalized (between 0 and 100) metric based on applications' cyclomatic complexity by function, duplication of code and maintainability index.

The Security Chart Widget graphically displays a quadrant where apps (or groups of apps) are placed according to the above-mentioned axis.

Please, visit [Decision quadrants](#) for an explanation.

Points in the displayed graphic can be customized (by **Group by** selector) to represent:

- Individual applications (setting Group By to “Not grouped”)
- Groups of applications (grouped by any of the available portfolios in **Group by** selector)

Additionally, every point has two main characteristics:

- Diameter (proportional to size in Locs)
- Color (the portfolio value the app belongs to. Please note that this option is only available when **Color by** selector has been set to any to the available portfolios)

## Decision Quadrants DataTable

The **Decision Quadrants DataTable** widget includes a data table of records (one application or group of applications per row) with the following summarized information:

- Business Value
- Complexity
- Risk Index
- Failure Risk
- Maintenance Risk
- Security Risk

Portfolio	Business value	Complexity	Risk index	Failure risk	Maintenance risk	Security risk
Java	100	100	1.0	1.0	1.0	1.0
C#	100	100	1.0	1.0	1.0	1.0
JavaScript	100	100	1.0	1.0	1.0	1.0
PHP	100	100	1.0	1.0	1.0	1.0
Python	100	100	1.0	1.0	1.0	1.0
Ruby	100	100	1.0	1.0	1.0	1.0
Swift	100	100	1.0	1.0	1.0	1.0
Kotlin	100	100	1.0	1.0	1.0	1.0
Go	100	100	1.0	1.0	1.0	1.0
Rust	100	100	1.0	1.0	1.0	1.0
C++	100	100	1.0	1.0	1.0	1.0
Haskell	100	100	1.0	1.0	1.0	1.0
F#	100	100	1.0	1.0	1.0	1.0
Scala	100	100	1.0	1.0	1.0	1.0
Clojure	100	100	1.0	1.0	1.0	1.0
Elixir	100	100	1.0	1.0	1.0	1.0
Erlang	100	100	1.0	1.0	1.0	1.0
Lua	100	100	1.0	1.0	1.0	1.0
Perl	100	100	1.0	1.0	1.0	1.0
R	100	100	1.0	1.0	1.0	1.0
Julia	100	100	1.0	1.0	1.0	1.0

Every record can be customized to represent:

- One individual application (setting **Group by** the selector to “Not grouped”)

- Groups of applications (grouped by the different values of the selected portfolio in **Group by** selector)

Additionally, the data table records can be ordered by any of the above columns by using the **Order by** the selector.

## Evolution Group

The **Evolution** widgets display the timely evolution of an application or a portfolio on a selected metric or indicator.

Available widgets:

- Evolution DataTable
- Evolution Timeline
- Evolution Top 10 chart

For a full understanding of Governance - Evolution, please visit [Evolution](#).

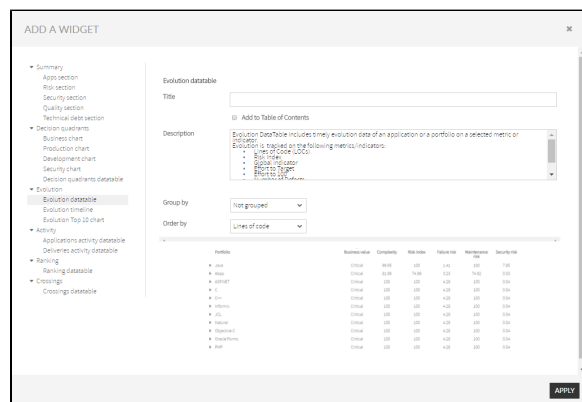
## Evolution DataTable

The **Evolution DataTable** widget includes timely evolution data of an application or a portfolio on a selected metric or indicator.

Evolution can be tracked on the following metrics/indicators:

- Lines of Code (LOCs)
- Risk Index
- Global Indicator
- Effort to Target
- Effort to 100
- Number of Defects

For a complete understanding of Governance - Evolution, please visit [Evolution](#).



Values for these metrics will be signed numbers that represent increments (+) or decrements (-) in the metric/indicator during the selected period.

Every record can be customized to represent:

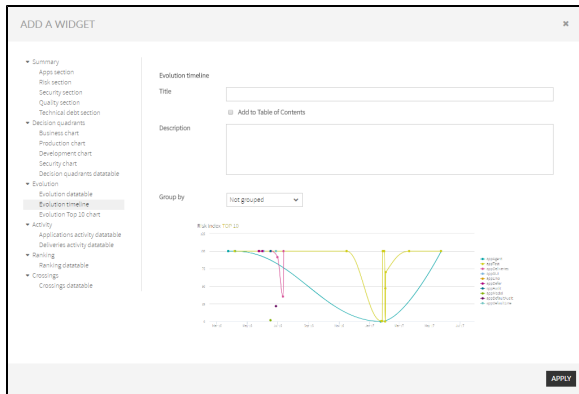
- One individual application (setting **Group by** the selector to "Not grouped")
- Groups of applications (grouped by the different values of the selected portfolio in **Group by** selector)

Additionally, the data table records can be ordered by any of the above columns by using the **Order by** the selector.

## Evolution Timeline

The **Evolution Timeline** widget displays timely evolution data of an application or a portfolio on a selected metric or indicator.

At the current moment, only the Risk Index metric is available.



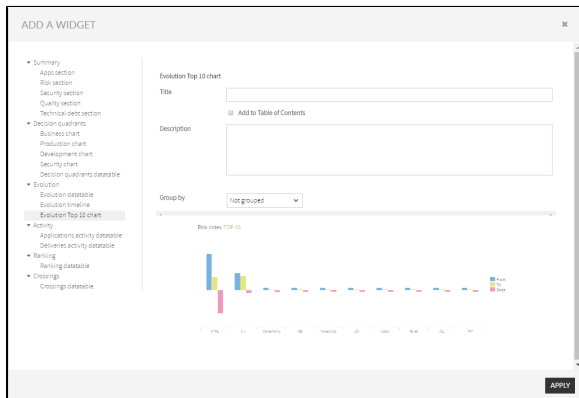
The points in the displayed graphic can be customized (by **Group by** selector) to represent:

- Individual applications (setting Group By to "Not grouped")
- Groups of applications (grouped by any of the available portfolios in **Group by** selector)

## Evolution Top 10 chart

The **Evolution Top 10 chart** widget displays differential data for the top 10 applications on a selected metric or indicator.

Currently, only the Risk Index metric is available.



Points in the displayed graphic can be customized (by **Group by** selector) to represent:

- Individual applications (setting Group By to "Not grouped")
- Groups of applications (grouped by any of the available portfolios in **Group by** selector)

## Activity Group

The **Activity** widgets display applications activity on a selected metric or indicator during a certain period.

Changes in activity can be viewed for a specific application or for those applications that belong to a selected portfolio.

Available widgets:

- Applications activity data table
- Deliveries activity data table

For a full understanding of Governance - Activity, please visit [Activity](#).

## Applications Activity DataTable

The **Applications Activity DataTable** Widget includes changes data of an application or a portfolio on a selected metric or indicator.

The activity can be tracked on the following metrics/indicators:

- Lines of Code (LOCs)
- Risk Index
- Global Indicator
- Effort to Target

- Effort to 100
- Number of Defects

For a complete understanding of Governance - Activity, refer to [Activity](#).

Values for these metrics will be “signed” numbers that represent increments (+) or decrements (-) in the metric/indicator since the beginning of the selected period.

Every record can be customized to represent:

- One individual application (setting **Group by** the selector to “Not grouped”)
- Groups of applications (grouped by the different values of the selected portfolio in **Group by** selector)

Additionally, the data table records can be ordered by any of the above columns by using the **Order by** the selector.

## Deliveries Activity DataTable

The **Deliveries Activity DataTable** Widget includes activity data of application's deliveries.

For every application, deliveries activity can be tracked on the following metrics/indicators:

- No of Baselines
- No of Change requests (total, OK and Failed)
- No of Deliveries (Total, Ok and Failed)
- etc.

For a full understanding of Governance - Activity, please visit [Activity](#).

Every record can be customized to represent:

- One individual application (setting **Group by** the selector to “Not grouped”)
- Groups of applications (grouped by the different values of the selected portfolio in **Group by** selector)

Additionally, the data table records can be ordered by any of the above columns by using the **Order by** the selector.

## Ranking Group

The **Ranking** widgets display rankings of applications (or applications grouped by portfolios) on a selected metric or indicator.

Available widgets:

- Ranking DataTable

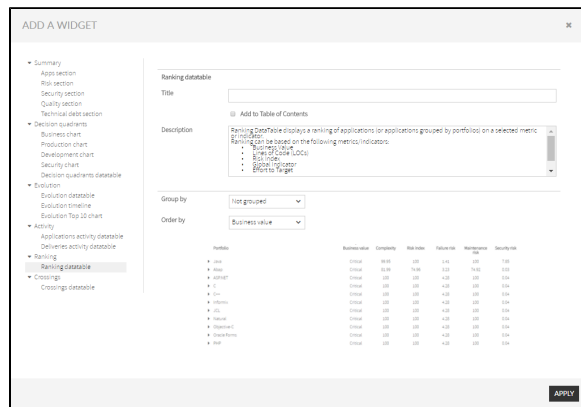
For a full understanding of Governance - Ranking, please visit [Ranking](#).

## Ranking DataTable

The **Ranking DataTable** widget includes a ranking of applications (or applications grouped by portfolios) on a selected metric or indicator.

Ranking can be based on the following metrics/indicators:

- Business Value
- Lines of Code (LOCs)
- Risk Index
- Global Indicator
- Effort to Target



Every record can be customized to represent:

- One individual application (setting **Group by** the selector to “Not grouped”)
- Groups of applications (grouped by the different values of the selected portfolio in **Group by** selector)

Additionally, the data table records can be ordered by any of the above columns by using the **Order by** the selector.

## Crossings Group

The **Crossings** widgets display a table where you can pick the metrics which values you want to see, crossing the data of two different portfolios you want to compare.

Available widgets:

- Crossings DataTable

For a complete understanding of Governance - Crossings, refer to [Crossings](#).

## Crossings DataTable

The **Crossings DataTable** widget allows defining tables where you can pick the metric whose values you want to see, crossing the data of two different portfolios you want to compare.

The table is designed by selecting two sets of portfolios (by **Rows** and **Columns** selectors) and a metric (**Metric** selector).

Available metrics are:

- Lines of Code (LOCs)
- Risk Index
- Global Indicator
- Effort to Target
- Failure Risk

- Maintenance Risk
- Security Risk
- Complexity

As a result, you will get a table where column/rows labels represent the different values of the selected portfolios and the inner cells will represent the aggregated data (added or averaged) of the selected metric for all the applications that belong to both portfolio values.

ADD A WIDGET

• Overview

Apps section

Risk section

Security section

Quality section

Technical debt section

• Decision quadrants

Business chart

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• Evolution

Evolution dashboard

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Evolution Top 10 chart

• Activity

Applications activity dashboard

Deliveries activity dashboard

• Barling

Barling dashboard

• Crossings

Crossings dashboard

Crossings dashboard

Title

Description

Rows

Columns

Metric

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Crossings Dashboard displays selected metric values crossing the data of two different portfolios you want to compare. Columns/rows labels represent the different values of the selected portfolios and the inner cells will represent the aggregated data (added or averaged) of the selected metric for all the applications that belongs to both portfolio values.

Business value

Business value

Lines of code

	Crossed	High	Medium	Total
APP1-APP1-1	11000	-	-	11000
APP2-APP1-100000	-	-	1000	1000
APP1-APP1-1	1000	-	-	1000
CROSS-APP	10170	10170	-	40340
CROSS-APP	-	10000	-	10000
CROSS-APP	10000000	-	10170	11000000
APP1-APP1-1	1000	-	-	1000
APP1-APP1-100000	-	-	10000	10000
APP1-APP1-1	-	-	1000	1000
Total	11017000	10170	10170	11017000

APPLY