



Help, My Reports Are Too Slow!

Daina Tupule

Error



Query execution timeout of 60 seconds reached.
Please try to make query simpler.

Close

**On the road of
increase query timeout**



Error

!

There was error when performing your request.
Please retry or go to other page.

Close

Error

!

Child process request failed with ChildProcess::MemoryOutError:

Close

Error

!

Child process request failed with Net::ReadTimeout:
The child process will be restarted now, please retry the request in a minute.

Close

Error

!

Failed to execute query. Error message:
OutOfMemory used=646081368, max=716177408

Close



Community Days

May 6, 2021

What to look for

**Best practices for
reports**

**Calculation
performance**

If it is not enough



Is there a better
solution?

Daina Tupule

What to look for

What I look for

Dimension combinations on Rows

Large dimensions

Multiple selections on Pages

Calculations

Pages
Drag here if needed

Columns
Measures

Rows
Nonempty

> Project

> Fix Version

Table Bar Line Pie Scatter Timeline Map Gantt Gauge

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Total ▾ Freeze header

| | | Issues created |
|--------------|----------------|----------------|
| + DEMO Alpha | + (no version) | 399 |
| | + 1.0 | 19 |
| | + 2.0 | 25 |
| | + 3.0 | 19 |
| | + 4.0 | 41 |
| | + 5.0 | 31 |
| | + 6.0 | 22 |
| | + 7.0 | 17 |
| | + 8.0 | 42 |
| + DEMO Beta | + 9.0 | 29 |
| | + (no version) | 386 |
| | + 1.0 | 21 |

What I look for

Dimension combinations on Rows

Large dimensions

Multiple selections on Pages

Calculations

Pages

> Project

> Issue Type

Rows

Nonempty

> Issue

> Assignee

> Status

Columns

Measures

Table

Bar

Line

Pie

Scatter

Timeline

Map

Gantt

Gauge

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Hide empty rows ▾

Total ▾

Freeze header

DEMO Alpha ▾

Story ▾

| Issue | Assignee | Status | Issues created |
|--------|--------------|--------|----------------|
| DA-1 | David Sand | Done | 1 |
| DA-10 | Duncan Snow | Done | 1 |
| DA-104 | Duncan Snow | Done | 1 |
| DA-108 | Sandra Adams | Done | 1 |
| DA-11 | Sandra Adams | Done | 1 |
| DA-110 | David Sand | Done | 1 |

What I look for

Dimension combinations on Rows

Large dimensions

Multiple selections on Pages

Calculations

Pages

> Project

> Issue Type

Rows

Nonempty

> Issue

Columns

> Measures

Table Bar Line Pie Scatter Timeline Map Gantt Gauge

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Hide empty rows

Total

Freeze header

DEMO Alpha Story

| Issue | Issues created | Hours spent | Original estimated hours |
|-------|----------------|-------------|--------------------------|
| DA-1 | 1 | 7.00 | 8.00 |
| DA-3 | 1 | 6.00 | 4.00 |
| DA-5 | 1 | 6.00 | 6.00 |
| DA-6 | 1 | 7.00 | 6.00 |
| DA-10 | 1 | 11.00 | 12.00 |

Issue

> Select individual members

All hierarchy level members

Select all members at level

Project 5 Issue 1893

Time

> Select individual members

All hierarchy level members

Select all members at level

Year 6 Quarter 22 Month 62

Day 1371

Sprint

All hierarchy level members

Select all members at level

Board 589 Sprint 7477

What I look for

Dimension combinations on Rows

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> Project

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Rows

Nonempty

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Columns

> Measures

Table

Bar

Line

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Timeline

Map

Gantt

Gauge

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Total ▾

ITSM Project ▾

Incident ▾

Open, In Progress, Confirmed, Waiting for support, Waitin... ▾

| | |
|-------------|----------------|
| | Issues created |
| + All Times | 1 |

What I look for

Dimension combinations on Rows

Large dimensions

Multiple selections on Pages

Calculations

Pages

> Project

> Issue Type

> Status

Rows

Nonempty

> Time

Columns

> Measures

Table

Bar

Line

Pie

Scatter

Timeline

Map

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Total ▾

Freeze header

ITSM Project ▾

Incident ▾

Except rejected ▾

| | |
|-------------|----------------|
| | Issues created |
| + All Times | 44 |

What I look for

Dimension
combinations
on Rows

Large
dimensions

Multiple
selections on
Pages

Calculations

Calculations on sets large dimensions

```
Count(Filter(
    Descendants([Issue].CurrentMember,[Issue].
[Issue]),
    [Measures].[Issue status] <> "Done"
    AND
    [Measures].[Issues created] > 0
))
```

Best practices for reports

Several dimensions on Rows

Pages

Drag here if needed

Columns

> Measures

Rows

Nonempty

> Project

> Fix Version

Table

Bar

Line

Pie

Scatter

Timeline

Map

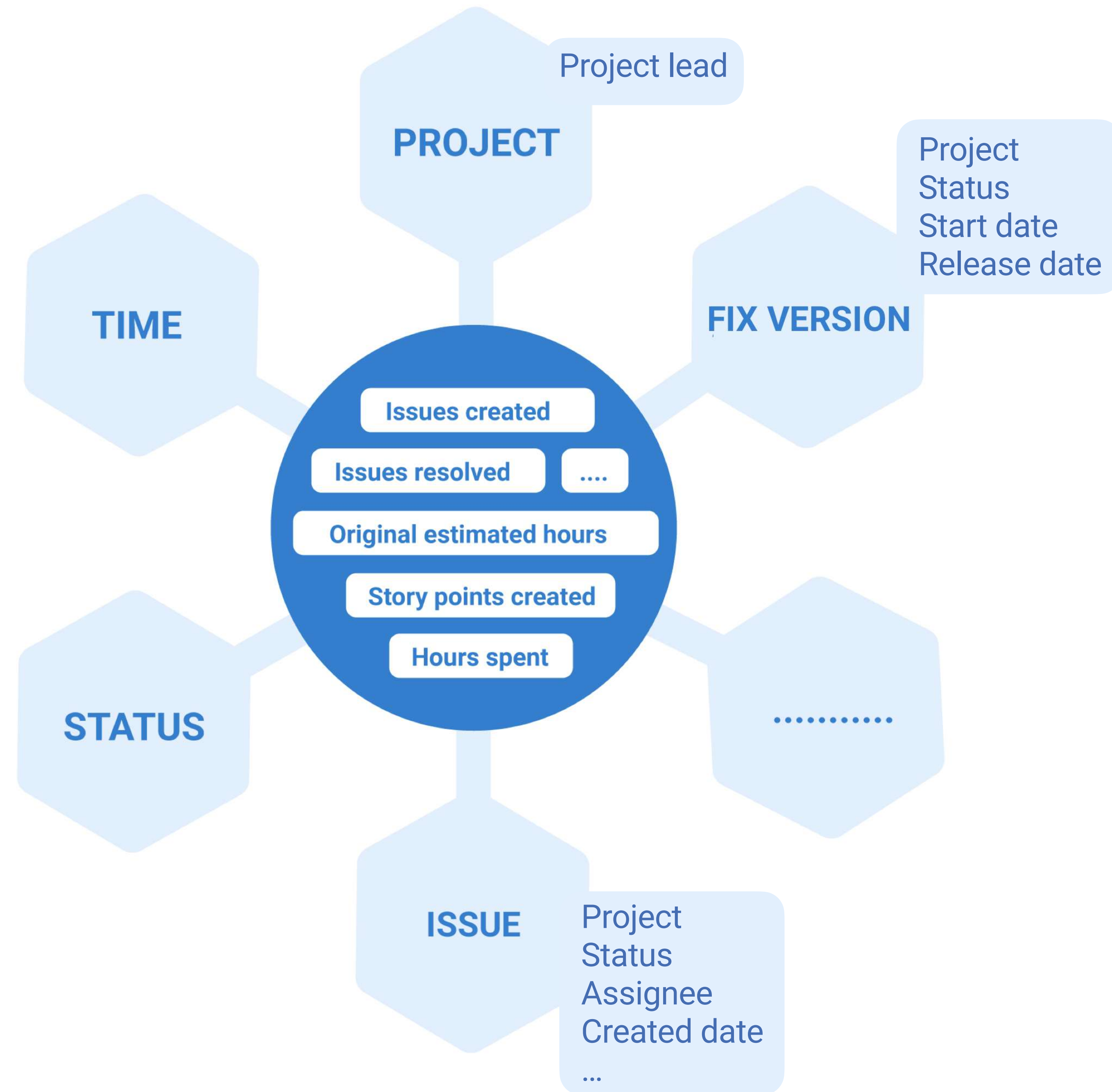
Gantt

Gauge

Total

Freeze header

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|--------------|----------------|----------------|
| + DEMO Alpha | + (no version) | 399 |
| | + 1.0 | 19 |
| | + 2.0 | 25 |
| | + 3.0 | 19 |
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| | + 7.0 | 17 |
| | + 8.0 | 42 |
| | + 9.0 | 29 |
| + DEMO Beta | + (no version) | 386 |
| | + 1.0 | 21 |



Several dimensions on Rows

Pages
Drag here if needed

Columns
Measures

Rows
Nonempty

Project

Fix Version

Table

Bar

Line

Pie

Scatter

Timeline

Map

Gantt

Gauge

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Total ▾

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| | + 5.0 | 31 |
| | + 6.0 | 22 |
| | + 7.0 | 17 |
| | + 8.0 | 42 |
| + 9.0 | 29 | |
| + DEMO Beta | + (no version) | 386 |
| | + 1.0 | 21 |

Pages
Drag here if needed

Columns
Measures

Rows
Nonempty

Fix Version

Select individual members

All hierarchy level members

Select all members at level

Project 5

Status 20

Version 57

By name

Name 18

Project 42

By status

Status 3

Project 14

Version 42

Drill into or expand

Pages

Table

Bar

Line

Pie

Scatter

Timeline

Map

Gantt

Gauge

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Hide empty ▾

Total ▾

Freeze header

| | | Issues |
|--------------|--------------|--------|
| + DEMO Alpha | (no version) | |
| | 1.0 | |
| | 2.0 | |
| | 3.0 | 19 |
| | 4.0 | 41 |
| | 5.0 | 31 |
| | 6.0 | 22 |
| | 7.0 | 17 |
| | 8.0 | 42 |
| | 9.0 | 29 |
| + DEMO Beta | (no version) | 386 |
| | 1.0 | 21 |
| | 2.0 | 30 |

Display name

All hierarchy level members

Drill into or expand

Project

Status

Version

By name

Name

Project

By status

Status

Project

Version

Expand all

Collapse all

Several dimensions on Rows - Issues

Pages

> Project

> Issue Type

Rows

Nonempty

> Issue

> Assignee

> Status

Columns

Measures

Table Bar Line Pie Scatter Timeline Map Gantt Gauge

Hide empty rows

Total

Freeze header

DEMO Alpha Story

| Issue | Assignee | Status | Issues created |
|--------|--------------|--------|----------------|
| DA-1 | David Sand | Done | 1 |
| DA-10 | Duncan Snow | Done | 1 |
| DA-104 | Duncan Snow | Done | 1 |
| DA-108 | Sandra Adams | Done | 1 |
| DA-11 | Sandra Adams | Done | 1 |
| DA-110 | David Sand | Done | 1 |

Pages

> Project

> Issue Type

Rows

Nonempty

> Issue

Columns

Measures

Table Bar Line Pie Scatter Timeline Map Gantt Gauge

Hide empty rows

Total

Freeze header

DEMO Alpha Story

| Issue | Issues created | Issue assignee | Issue status |
|-------|----------------|----------------|--------------|
| DA-1 | | David Sand | Done |
| DA-3 | | Duncan Snow | Done |
| DA-5 | | Anna Linda | Done |
| DA-6 | | Steve Davis | Done |
| DA-10 | | Duncan Snow | Done |
| DA-11 | | Sandra Adams | Done |
| DA-15 | | Sandra Adams | Done |

Large dimensions

Pages

> Project

> Issue Type

Columns

> Measures

Table Bar Line Pie Scatter Timeline Map Gantt Gauge

Hide empty rows Total Freeze header

Rows

Nonempty

DEMO Alpha Story

| Issue | Issues created | Hours spent | Original estimated hours |
|-------|----------------|-------------|--------------------------|
| DA-1 | 1 | 7.00 | 8.00 |
| DA-3 | 1 | 6.00 | 4.00 |
| DA-5 | 1 | 6.00 | 6.00 |
| DA-6 | 1 | 7.00 | 6.00 |
| DA-10 | 1 | 11.00 | 12.00 |

Pages

> Issue

> Issue Type

Columns

> Measures

Table Bar Line Pie Scatter Timeline Map Gantt

Nonempty Total Freeze header

Rows

Nonempty

DEMO Alpha Story

> Issue

> All hierarchy level members

> Drill into or expand

Pages

| Issue | Issues created | Hours spent | Original estimated hours |
|-------|----------------|-------------|--------------------------|
| DA-1 | 1 | 7.00 | 8.00 |
| DA-3 | 1 | 6.00 | 4.00 |
| DA-5 | 1 | 6.00 | 6.00 |
| DA-6 | 1 | 7.00 | 6.00 |
| DA-10 | 1 | 11.00 | 12.00 |

Large dimensions

Pages

> Sprint

Rows

Nonempty

Sprint

▼ All hierarchy level members

Select all members at level

Board 6 Sprint 94

Cycle delete

Cycle 30 Sprint 94

> Drill into or expand

Pages

Columns

> Measures

Table Bar Line Pie Scatter Timeline Map Gantt Gauge

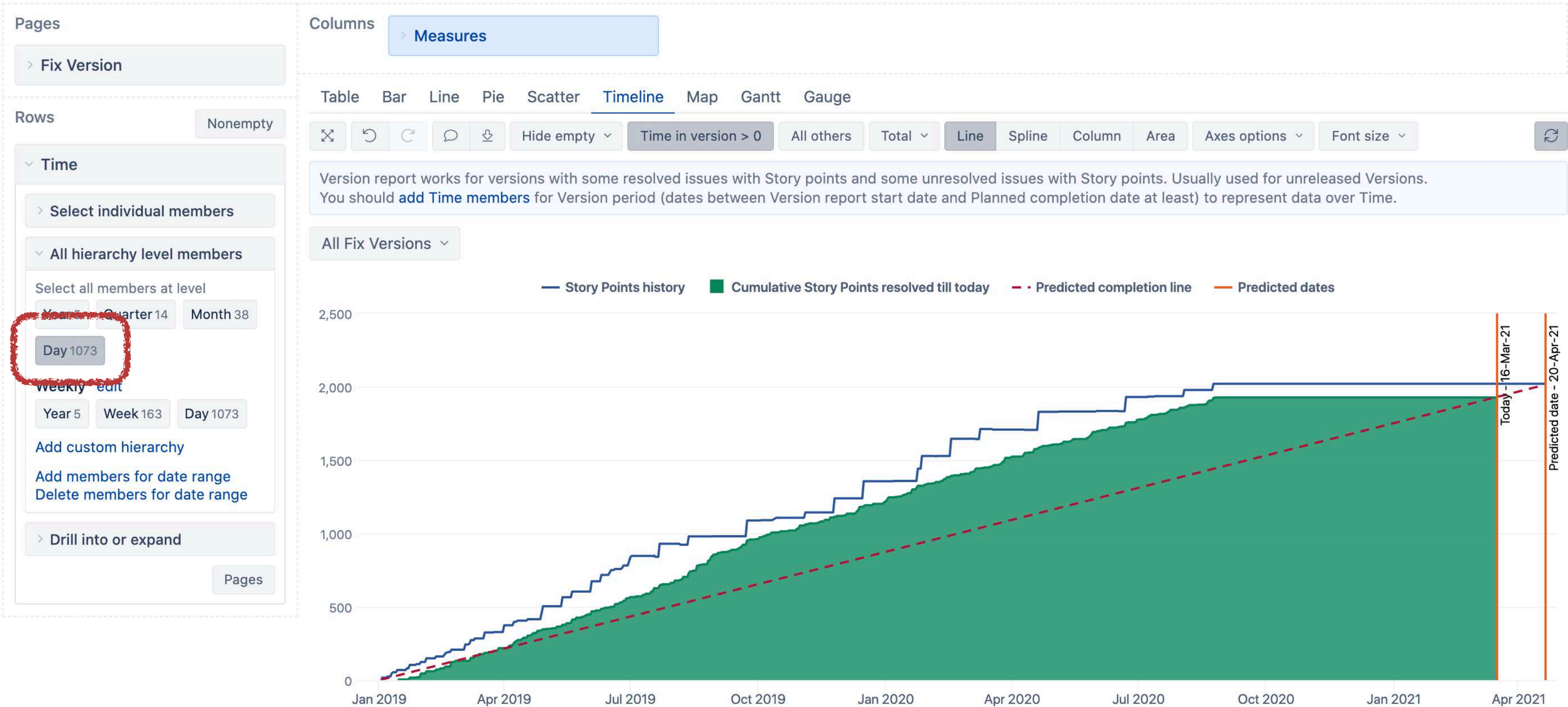
Hide empty

Sprint start date between 1 year ago and today

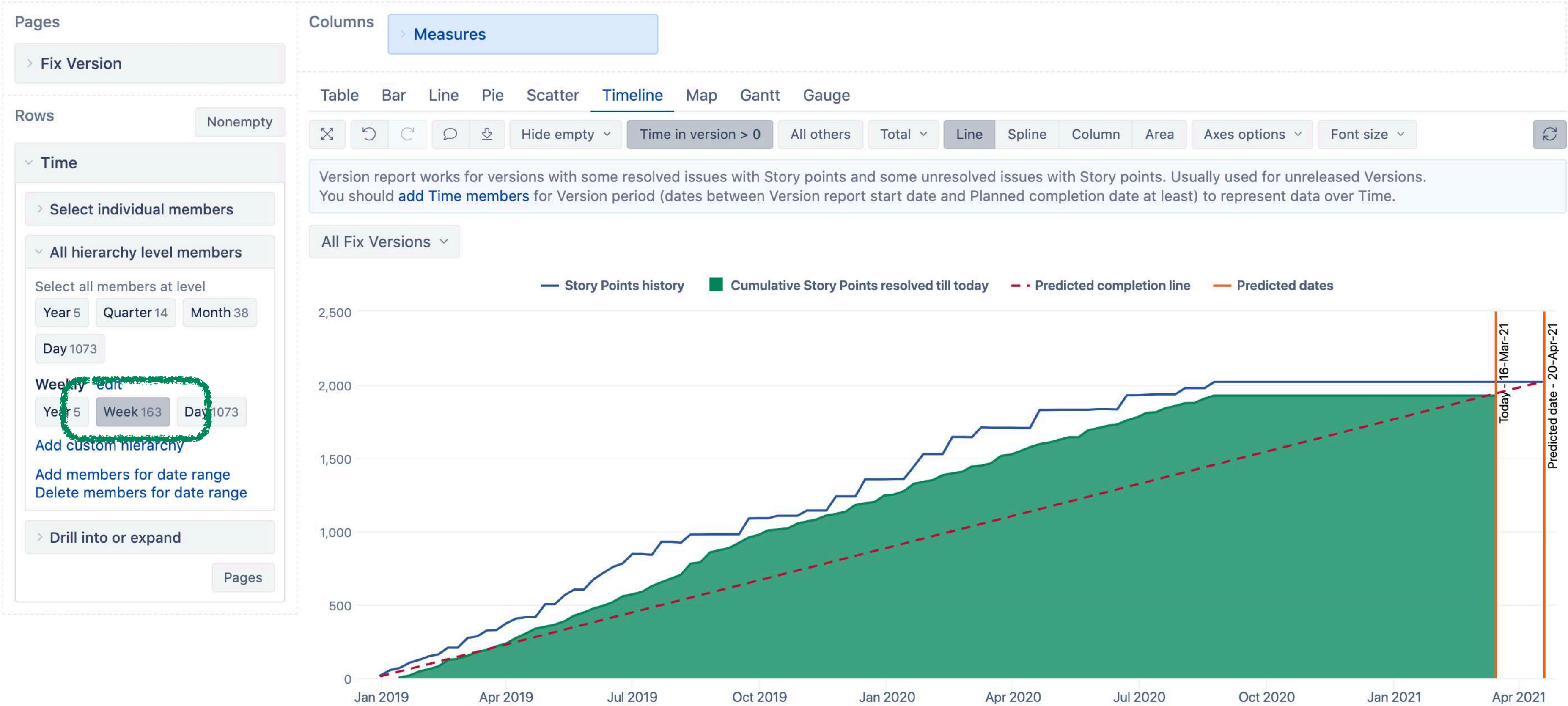
D1 board

| | Sprint Story Points committed | Sprint Story Points completed | Sprint start date | Sprint end date |
|--------------|-------------------------------|-------------------------------|-------------------|-----------------|
| D1 Sprint 22 | 23 | 23 | Mar 30 2020 | Apr 20 2020 |
| D1 Sprint 23 | 16 | 16 | Apr 20 2020 | May 11 2020 |
| D1 Sprint 24 | 19 | 29 | May 11 2020 | Jun 01 2020 |
| D1 Sprint 25 | 19 | 12 | Jun 01 2020 | Jun 22 2020 |
| D1 Sprint 26 | 15 | 18 | Jun 22 2020 | Jul 13 2020 |
| D1 Sprint 27 | 22 | 22 | Jul 13 2020 | Aug 03 2020 |
| D1 Sprint 28 | 22 | 22 | Aug 03 2020 | Aug 24 2020 |
| D1 Sprint 29 | 24 | | Aug 24 2020 | Sep 14 2020 |

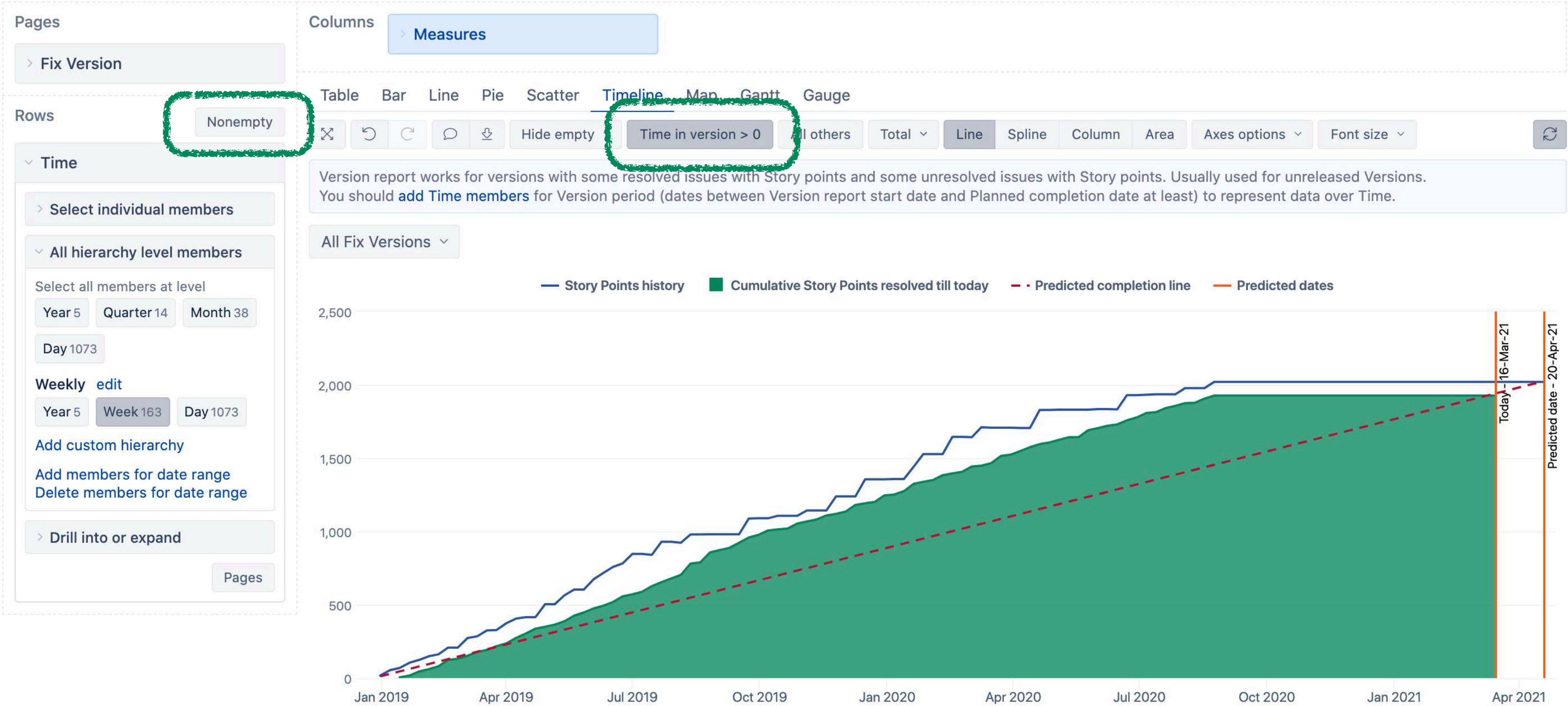
Large dimensions



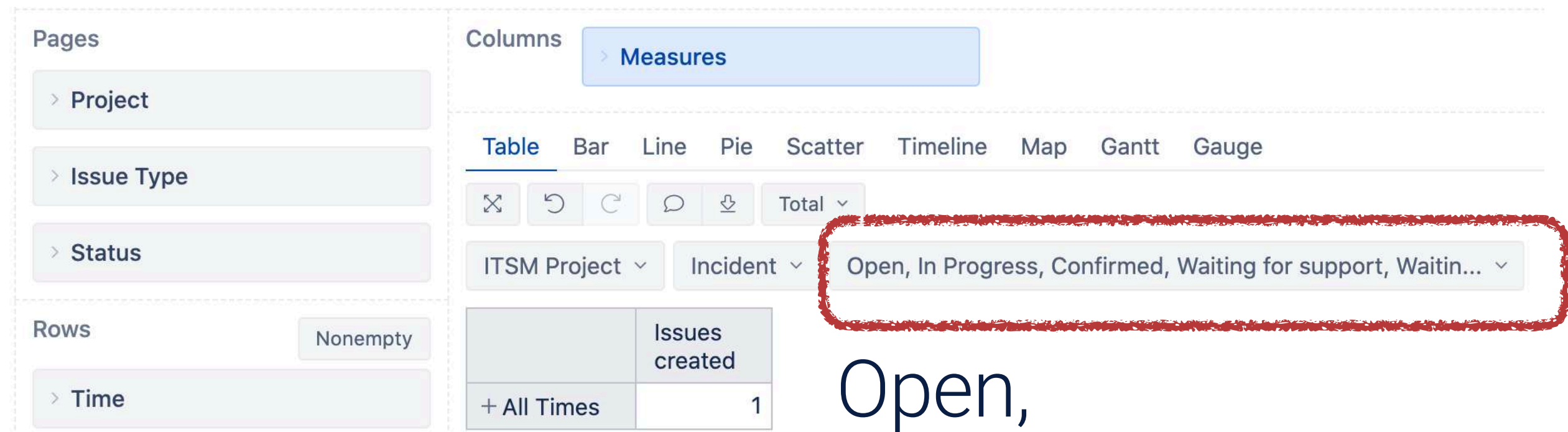
Large dimensions



Large dimensions



Multiple values selections on Pages



Pages

- > Project
- > Issue Type
- > Status

Columns

> Measures

Table Bar Line Pie Scatter Timeline Map Gantt Gauge

ITSM Project Incident Open, In Progress, Confirmed, Waiting for support, Waitin... Total

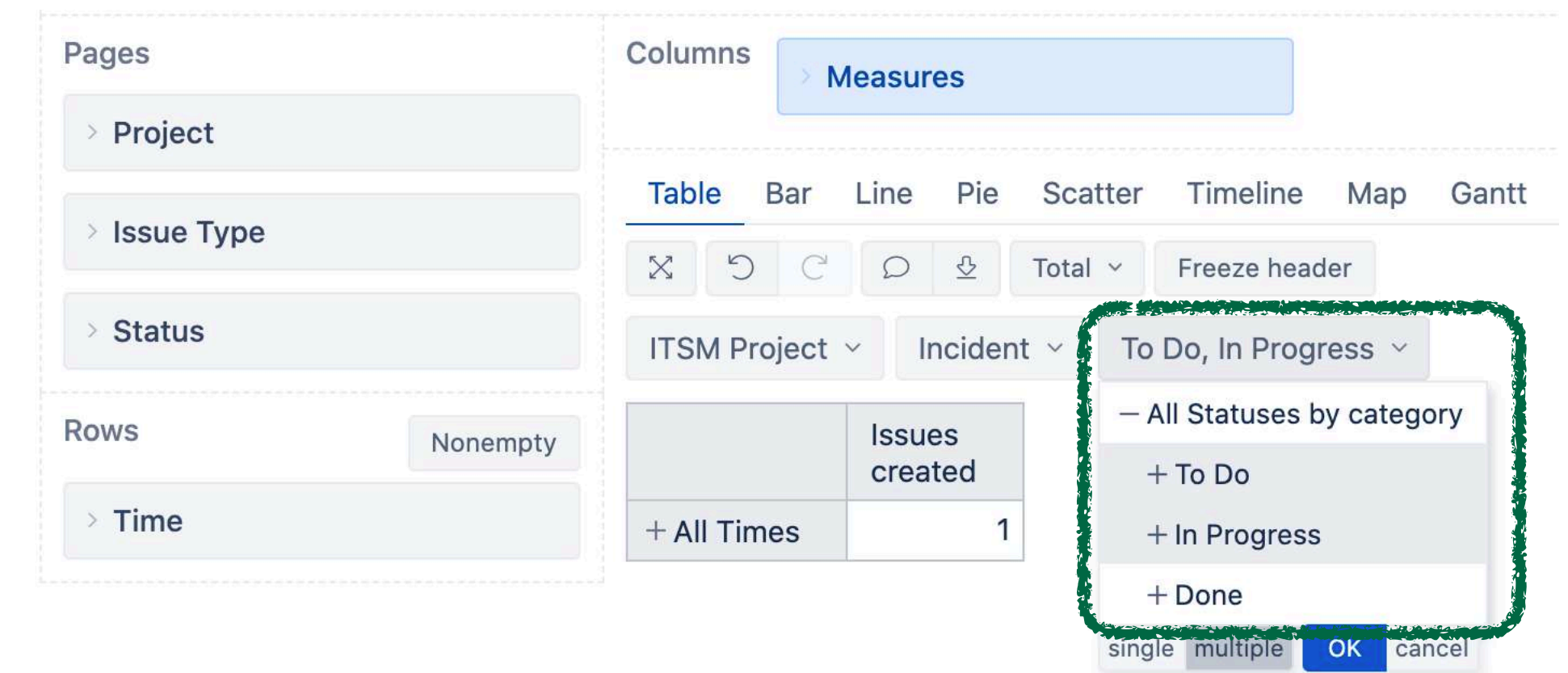
Rows

Nonempty

| | Issues created |
|-------------|----------------|
| + All Times | 1 |

Open,
In Progress,
Confirmed,
Waiting for support,
Waiting for customer
= 5 x calculations

Drill through issues >
x all issues
imported into the account



Pages

- > Project
- > Issue Type
- > Status

Columns

> Measures

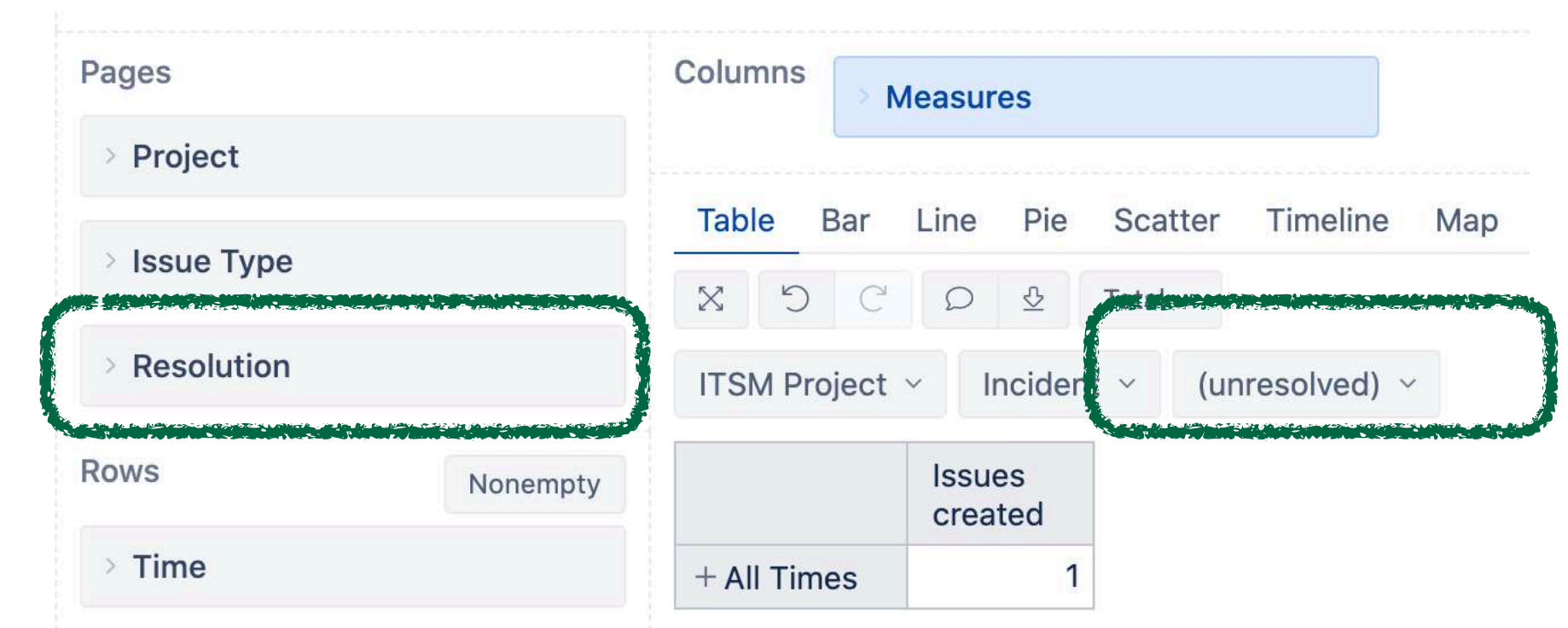
Table Bar Line Pie Scatter Timeline Map Gantt

ITSM Project Incident To Do, In Progress Total Freeze header

Rows

Nonempty

| | Issues created |
|-------------|----------------|
| + All Times | 1 |



Pages

- > Project
- > Issue Type
- > Resolution

Columns

> Measures

Table Bar Line Pie Scatter Timeline Map

ITSM Project Incident (unresolved) Total

Rows

Nonempty

| | Issues created |
|-------------|----------------|
| + All Times | 1 |

Multiple values selections on Pages

Pages

> Project

> Issue Type

> Status

Columns

> Measures

Table

Bar

Line

Pie

Scatter

Timeline

Map

ITSM Project

Incident

Except rejected

Rows

Nonempty

> Time

| | |
|-------------|----------------|
| | Issues created |
| + All Times | 44 |

Jira import options

GeneralAdd-onsCustom fieldsAdditional options

Additional filter

JQL query

status != Rejected

Optional additional JQL query to limit which issues from selected projects to import. By default all issues from selected projects will be imported.

Pages

> Project

> Issue Type

> Status

Columns

> Measures

Table

Bar

Line

Pie

Scatter

Timeline

Map

ITSM Project

Incident

All Statuses

Rows

Nonempty

> Time

| | |
|-------------|----------------|
| | Issues created |
| + All Times | 44 |

Calculation performance

Calculations on sets

```
Count(Filter(  
  Descendants([Issue].CurrentMember,[Issue].[Issue]),  
  [Measures].[Issue status] <> "Done"  
  AND  
  [Measures].[Issues created] > 0  
))
```

Calculation performance

Tuples and arithmetic operations

Other dimensions

Use properties

Tuples

Substitute calculations on sets whenever possible

```
( [Measures].[Issues created],  
  [Resolution].[ (unresolved) ] )
```

Arithmetic operations

Check if some arithmetic operations can give you the needed results

```
( [Measures].[Issues created],  
  [Status].DefaultMember )  
-  
( [Measures].[Issues created],  
  [Status].[Done] )
```

Calculation performance

Tuples and
arithmetical
operations

Other
dimensions

Use properties

Other dimensions

Use other dimensions to minimize count of members that will be included in the calculation

Status > Resolution

Time

Any other dimension explicitly addressed in the calculation you would like to optimize

```
Sum(  
  Except(  
    [Status].[Status].Members,  
    [Status].[Done]  
  ),  
  [Measures].[Issues created]  
)
```


Calculation performance

Tuples and
arithmetical
operations

Other
dimensions

Use properties

Optimize set by using properties as only filters

```
Sum(Filter(
    Descendants([Issue].CurrentMember,[Issue].
[Issue]),
    [Measures].[Issue status] <> "Done"
    AND
    DateInPeriod(
        [Measures].[Issue created date],
        [Time].CurrentHierarchyMember
    )
),
[Measures].[Issues created]
))
```

If it is not enough

**If it is not
enough**

**Custom
hierarchies**

Calculated
JavaScript
custom fields

Plan several
accounts

Custom hierarchies

Build custom hierarchies on properties imported with additional data import

Applicable for: Project, Sprint, any user dimension, more dimensions coming soon

Great as a substitute of multiple selections / calculated members

Points for consideration

Account specific - should be defined in each account

Easier to support and maintain different scenarios for one dimension with less impact on database size

Some scenarios could be easier to prepare (excel file with values)

**If it is not
enough**

Custom
hierarchies

**Calculated
JavaScript
custom fields**

Plan several
accounts

JavaScript custom fields

Build new dimensions and new measures

Great as a substitute of complex calculations

Points for consideration

Admin is needed to define new fields

The best option to import new measures

More complex scenarios

Option to extend data model

Will impact database size (dimensions more than measures and dates)

If it is not enough

Custom
hierarchies

Calculated
JavaScript
custom fields

**Plan several
accounts**

Overview

Many issues , overview reports, imported measures

Actual data

Limit data by Projects and JQL query to get small actual issue set for each team / project
> use template reports

Template accounts

Define and maintain a set of approved reports for teams / projects

Make it a habit

A stylized world map in shades of blue and purple, with a network of white dotted lines connecting various global locations. The text "Thank you!" is centered over the map in a large, white, sans-serif font.

Thank you!