



# The World of filters in Safran Project

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# Filtering in General

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- The most powerful/comprehensive available
- Filter on a field-by-field basis
- Filter on 'anything sensible'
- ... and still highly user friendly
  
- Highly precise selection of information => quality reporting
- Inaccurate selection => inaccurate reporting
  
- Filters are Global and may be used throughout Safran database
  
- The best thing since sliced bread

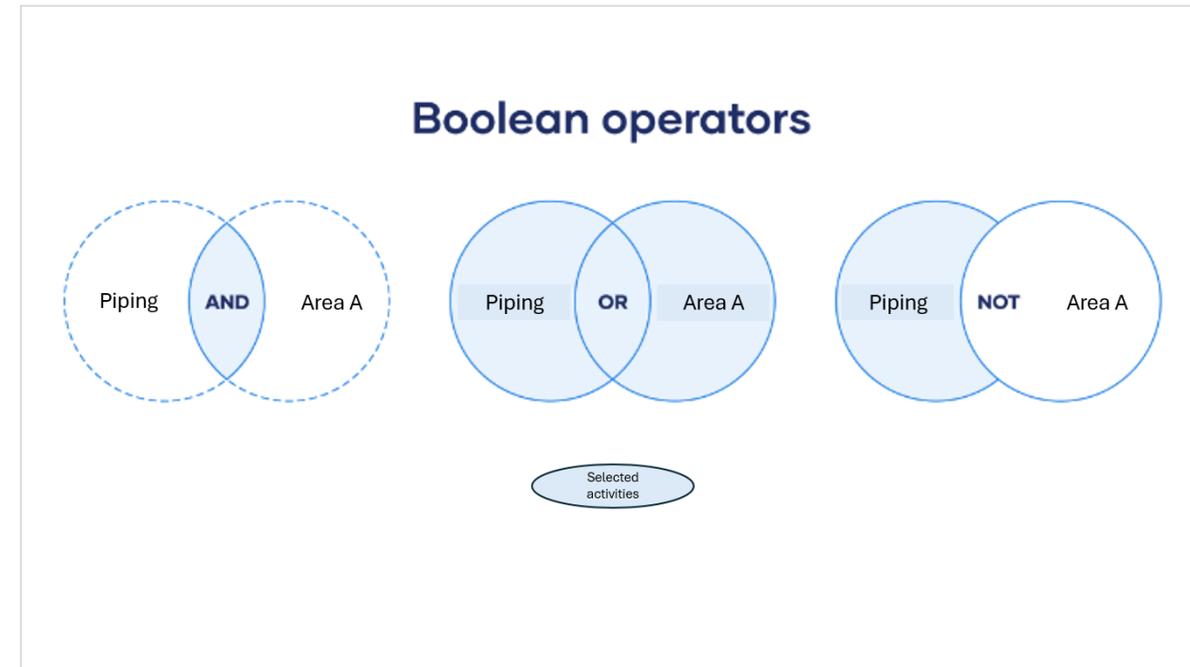


# Filtering in General

Boolean Algebra - George Boole English math. 1815-1864

Concerned with **True** or **False**

- Boolean operators AND, OR, NOT



# Filtering in General

- Friend or Foe?
- Simple selection Discipline=Piping
- AND *all* clauses must be True
- OR *at least one* clause must be True
- Complex selection Multiple Cases/Levels
- Use parentheses to group clauses
- Analyze by starting with innermost case and work outwards
- If all else fails.....use a Flag field to identify specific activities.

The screenshot shows a 'Filters' dialog box with the following configuration:

- Filter: Tc - Resterende stålkjemepeler (JONAS GRAN)
- From: All Users
- Buttons: New..., Save As..., Rename..., Delete
- Table with 5 columns: (, Field, Operator, Expression, ) And/Or
- Row 1: (, MC Oppstart Igangkjøring (SLETT?) (Reference 13), =, V1-Ny, ) AND
- Row 2: (, M3 - Plass i vognen (Reference 7), <, K201-UE: Seabrookers, )
- Buttons: Insert Row, Add Row, Delete Row, Clear All, Move Up, Move Down, Apply, OK, Cancel

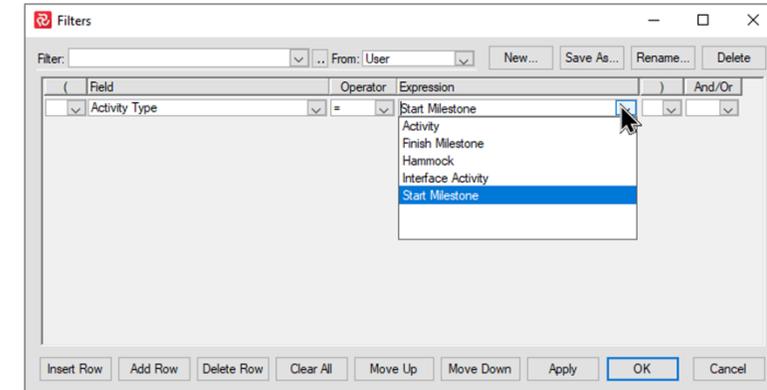
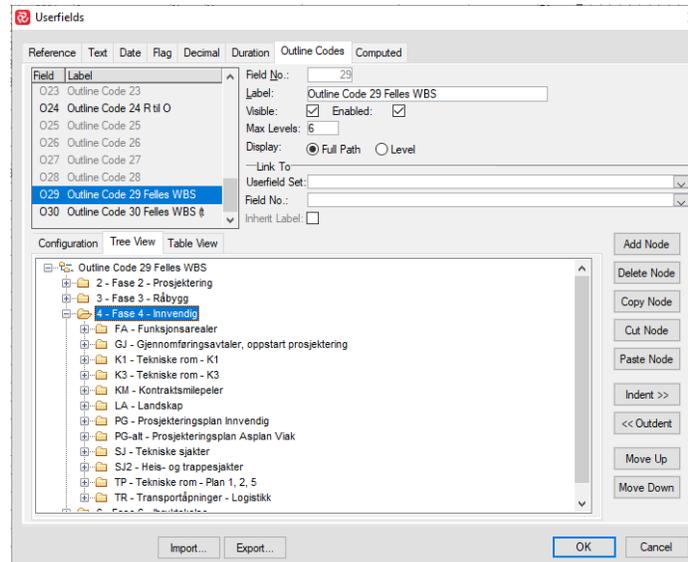
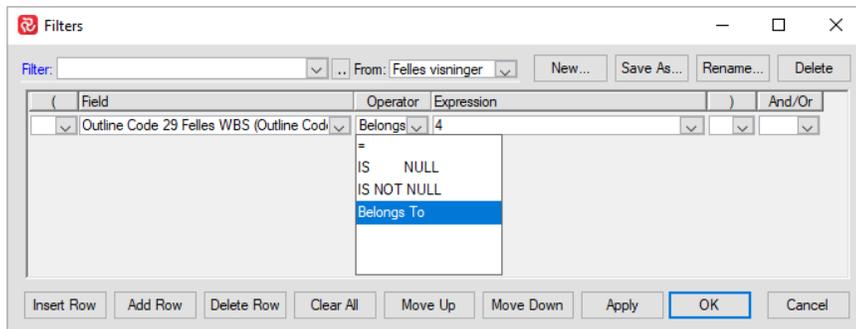
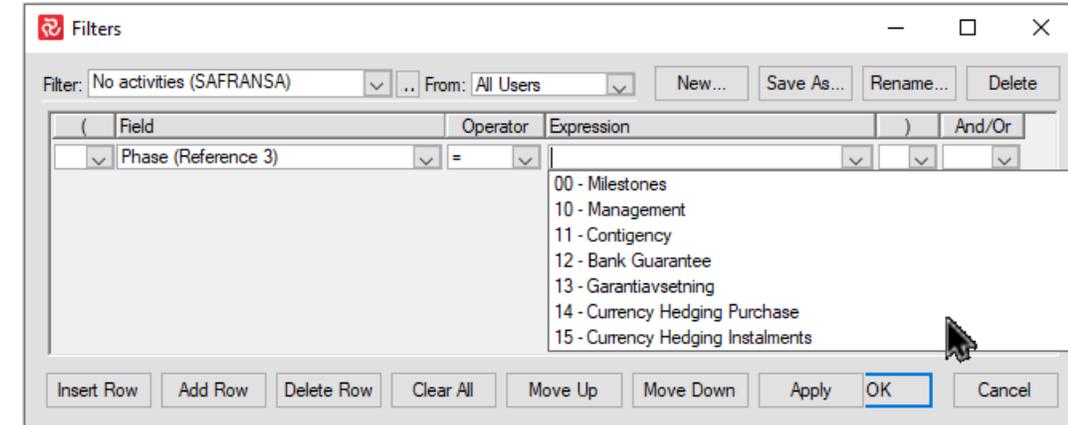
The screenshot shows a 'Filters' dialog box with a complex filter rule:

- Filter: (empty)
- From: All Users
- Buttons: New..., Save As..., Rename..., Delete
- Table with 5 columns: (, Field, Operator, Expression, ) And/Or
- Row 1: (((, Cancelled Date, IS, NULL, ) AND
- Row 2: (, Project Name, =, LVB - Nivå 3 - Taktplan Innvendig, ) AND
- Row 3: ((, N1 - Hovedseksjon (Reference 1), <, GJ, ) OR
- Row 4: (, N1 - Hovedseksjon (Reference 1), <, KM, ) AND
- Row 5: (, N1 - Hovedseksjon (Reference 1), <, LA, ) OR
- Row 6: (, Description, Not Begi, MMI, ) AND
- Row 7: (, Description, Not Begi, Vogn 0, ) OR
- Row 8: (, N3 - Arealtyper (Reference 3), <, MP, ) OR
- Row 9: (, N3 - Arealtyper (Reference 3), Not Begi, ARB, ) AND
- Row 10: (, N1 - Hovedseksjon (Reference 1), <, PG, )) AND
- Row 11: (, Subproject, =, default, )) AND
- Row 12: (, N3 - Arealtyper (Reference 3), <, I, ))) AND
- Row 13: (, M7 - SF Nivå (Reference 12), IS NOT, NULL, ) OR
- Row 14: (, M7 - SF Nivå (Reference 12), <, SF11, ) AND
- Row 15: (, Early Finish, >, 1.1.24, )
- Buttons: Insert Row, Add Row, Delete Row, Clear All, Move Up, Move Down, Apply, OK, Cancel

# Intelligent Expressions

R fields, Outline codes and fixed value fields have context sensitive dropdowns

Outline codes also have a 'Belongs To' operator which will select all activities that logically belong to a chosen node.



# IN and Not IN operators

- Multiple R field lines such as:
- Product=FD00-A OR Product=FE00-A OR  
Product=GR00-A OR Product=HA00-A
- Can be replaced by:
- Product IN FD00-A, FE00-A, GR00-A, HA00-A
- Thus simplifying your filter

The screenshot shows a 'Filters' dialog box with the following configuration:

- Filter: Products
- From: User
- Buttons: New..., Save As..., Rename..., Delete
- Table structure:

(	Field	Operator	Expression	)	And/Or
	Product (Reference 2)	=	FD00-A - Top Drive		OR
	Product (Reference 2)	=	FE00-A - Dolly		OR
	Product (Reference 2)	=	GR00-A - Roughneck		OR
	Product (Reference 2)	=	HA00-A - Mounted Compensator		

Buttons at the bottom: Insert Row, Add Row, Delete Row, Clear All, Move Up, Move Down, Apply, OK, Cancel

The screenshot shows a 'Filters' dialog box with the following configuration:

- Filter: Products in
- From: User
- Buttons: New..., Save As..., Rename..., Delete
- Table structure:

(	Field	Operator	Expression	)	And/Or
	Product (Reference 2)	IN	FD00-A, FE00-A, GR00-A, HA00-A		

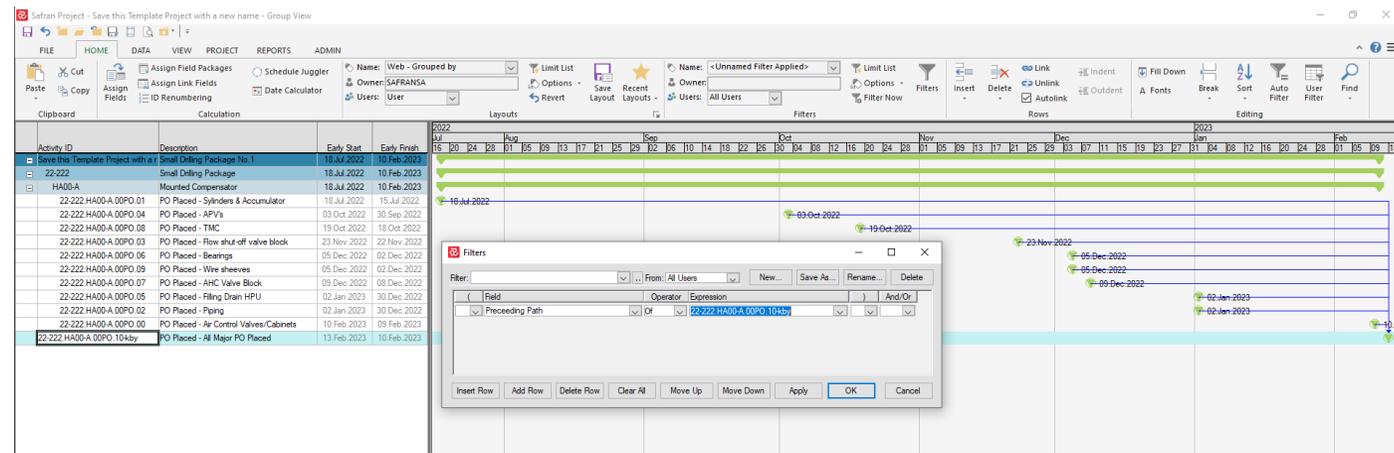
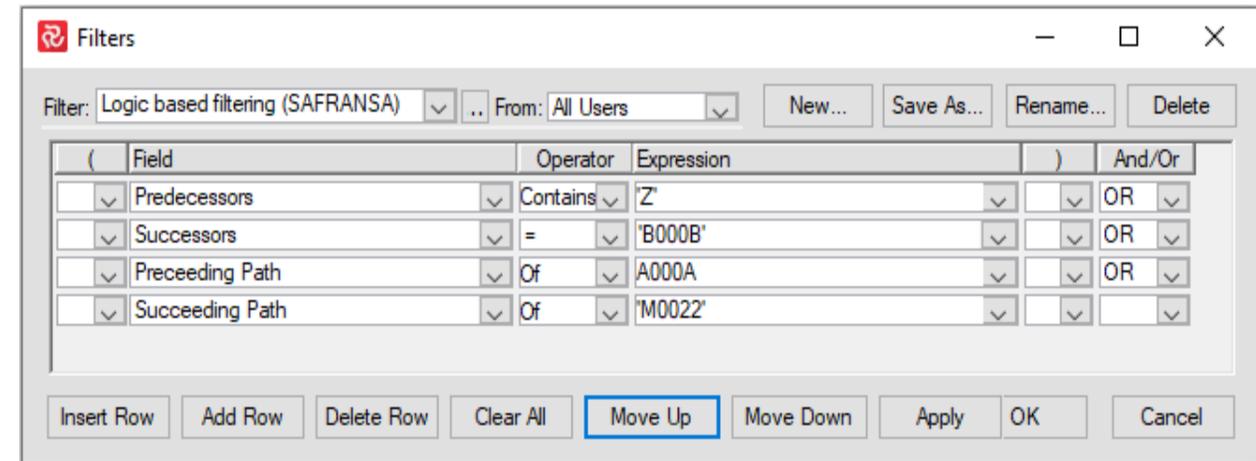
Buttons at the bottom: Insert Row, Add Row, Delete Row, Clear All, Move Up, Move Down, Apply, OK, Cancel

# Logic Based Filtering

Logic related fields Preceding path/Succeeding path

Select activities leading into an activity/milestone

Succeeding/Preceding path can also be combined with AND to select all activities between two points in network



# Newer Filter fields

List of filterable fields increases with new functionality:

- Activity Logic
- Actual % Baseline/Current/Total
- Indent Level
- Out of Sequence
- Longest Path
- Number of Predecessors/Disabled
- All Predecessors Complete
- Predecessors lag

Filters

Filter: New filter fields (SAFRANSA) .. From: All Users

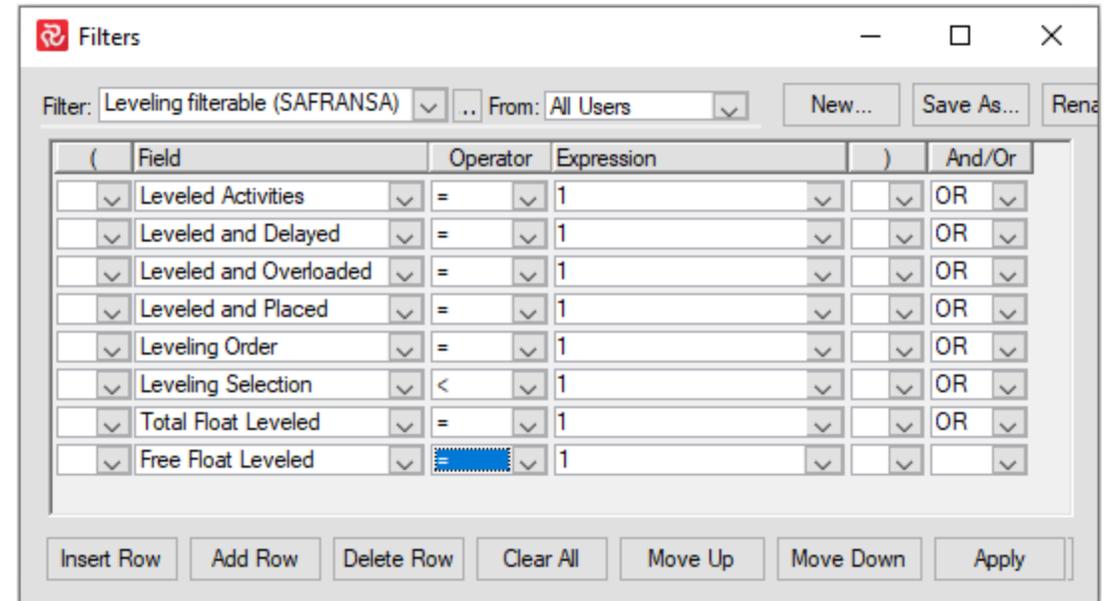
(	Field	Operator	Expression	)	And/Or
	Activity Logic	=	Start Activity		OR
	Actual % Baseline Scope	=	1		OR
	Actual % Current Scope	=	1		OR
	Actual % Total Scope	=	1		OR
	Out Of Sequence	=	1		OR
	Current Out Of Sequence	=	1		OR
	Longest Path	=	1		OR
	Float Path	=	1		OR
	Float Path Order	=	1		OR
	Minimum Continuous Start Duration	=	1		OR
	Predecessors	=	1		OR
	Preceding Path	Of	A		OR
	Number Of Predecessors	=	1		OR
	Number Of Disabled Predecessors	=	1		OR
	Predecessors Lag	=	1		OR
	All Predecessors Completed	=	Y		OR
	Successors	=	1		OR
	Succeeding Path	Of	A		OR
	Number Of Successors	=	1		OR
	Number Of Disabled Successors	=	1		OR
	Successors Lag	=	1		OR

Insert Row Add Row Delete Row Clear All Move Up Move Down Apply OK Cancel

# Newer Filter fields

List of filterable fields increases with new functionality

In this case related to the Leveling Process



# Auto filter

Typical Auto filter capabilities on a field-by-field basis

'Extended' filter to limit list of values

In combination with Std. Safran filter/User Filter

The screenshot displays the Safran Project software interface. The main window shows a Gantt chart with activity bars and a data table. The data table has columns for Activity ID, Description, Activity Status, Count, Early Start, Early Finish, Planned OTI, Actual OTI, Planned OTI, Planned Expiry, Expended OTI, and Client layout. The Auto Filter dialog box is open, showing a search field and a list of filter options. The dialog box has a title bar 'Auto Filter Description' and a close button. The list of filter options includes: Select All, BOM Released, Design Freeze, Design Review Level 2, Engineering - EHY (Hydraulic), Engineering - EMD (Mechanical), Engineering - EST (Structural), Fabrication Start, Fabrication Start - Synchronizers & Accumulator, Free Issued Items Need Date - Gearbox, Free Issued Items Need Date - Pipehandler, Items - AC-Motor, ITP Received - Gearbox, ITP Received - Pipehandler, ITP Received - Synchronizers & Accumulator, and PO Placed - Pipehandler. The dialog box also has buttons for Add, Insert, Delete, Move Up, Move Down, Apply, OK, and Cancel. The background Gantt chart shows activity bars for various activities, and the data table shows activity details.

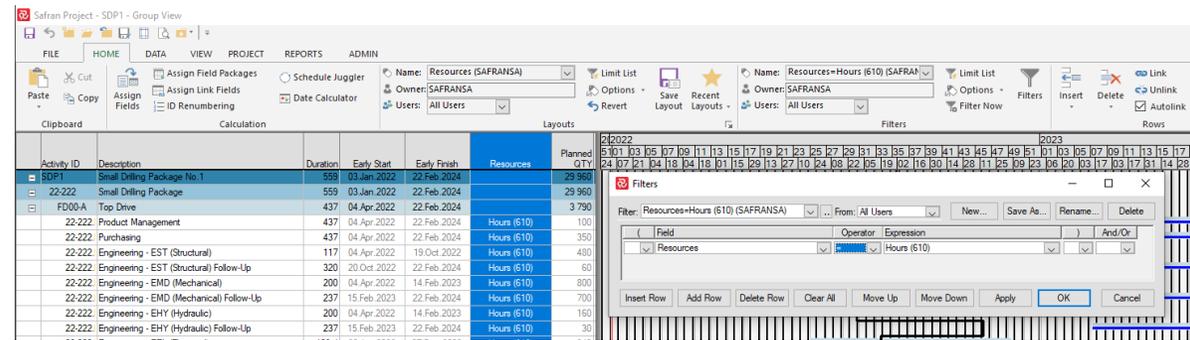
# Selected Rows

Pre-select activities for certain operations:

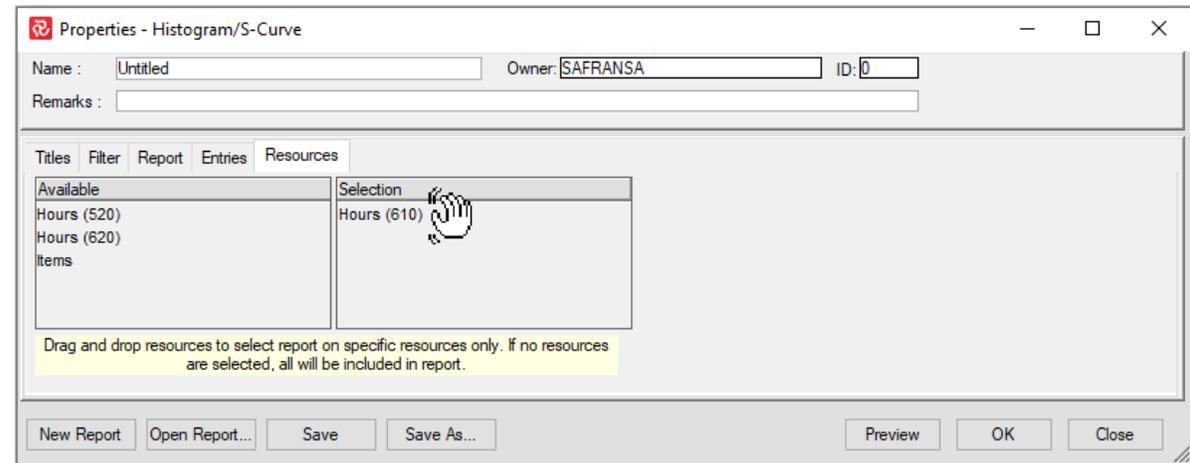
- Assign fields
- Partial Baseline
- Assign Link fields

# Resource Filters

Find activities with certain Resources



Limit Quantities/Scope by including only certain Resources in Reports section



# Conditional Formatting

Use filters to control formatting of rows or individual cells at activity/summary level in Barchart editor

The screenshot displays the Barchart editor interface for a project named 'Safiran Project - SDPI - Group View'. The main window shows a Gantt chart with a timeline from 2022 to 2024. Below the Gantt chart is a data table with the following columns: Activity ID, Description, Baseline QTY, Baseline Planned, Progress, and Actual. The table contains 46 rows of activities, including tasks like 'PO Placed - Pipehandler', 'Fabrication Pipehandler', 'IAT pipehandler', 'Contractual Delivery Date', 'Product kick-off', 'Long Lead Items identified', 'Product Management', 'Purchasing', 'Design Manual Ready For Submittal to DINV', 'DVR Approved', 'Survey Report Received', 'Engineering - EST (Structural)', 'Engineering - EST (Structural) Follow-Up', 'Engineering - EMD (Mechanical)', 'Engineering - EMD (Mechanical) Follow-Up', 'Engineering - EHY (Hydraulic)', 'Engineering - EHY (Hydraulic) Follow-Up', 'Engineering - EEL (Electrical)', 'Engineering - EEL (Electrical) Follow-Up', 'Engineering - EPR (Software)', 'Engineering - EPR (Software) Follow-Up', 'Design Review Level 2', 'Design Freeze', 'BOM Released', 'Items - Service Loop, hoses, suspension system et', 'All Items Received at Warehouse', 'Delivery of all items to Assembly Site', 'PO Placed - Gearbox', 'Fabrication gearbox', 'IAT gearbox', 'IAT- Top Drive', 'FAT Top Drive', 'Packing and Preservation', 'Ready For Delivery', 'Transport Pipehandler to Assembly Site', 'PO Placed - Main Frame', 'Fabrication Main Frame', 'Transport Main Frame to Assembly Site', 'PO Placed - Torque Wrench', 'Fabrication Torque Wrench', 'IAT Torque wrench', and 'Transport Torque Wrench to Assembly Site'. The table is color-coded based on progress, with yellow for 'On target/Ahead' and red for 'Behind schedule'. Several dialog boxes are open, including 'Column Properties', 'Filters', and 'Fonts', demonstrating how filters and formatting are applied to the data.

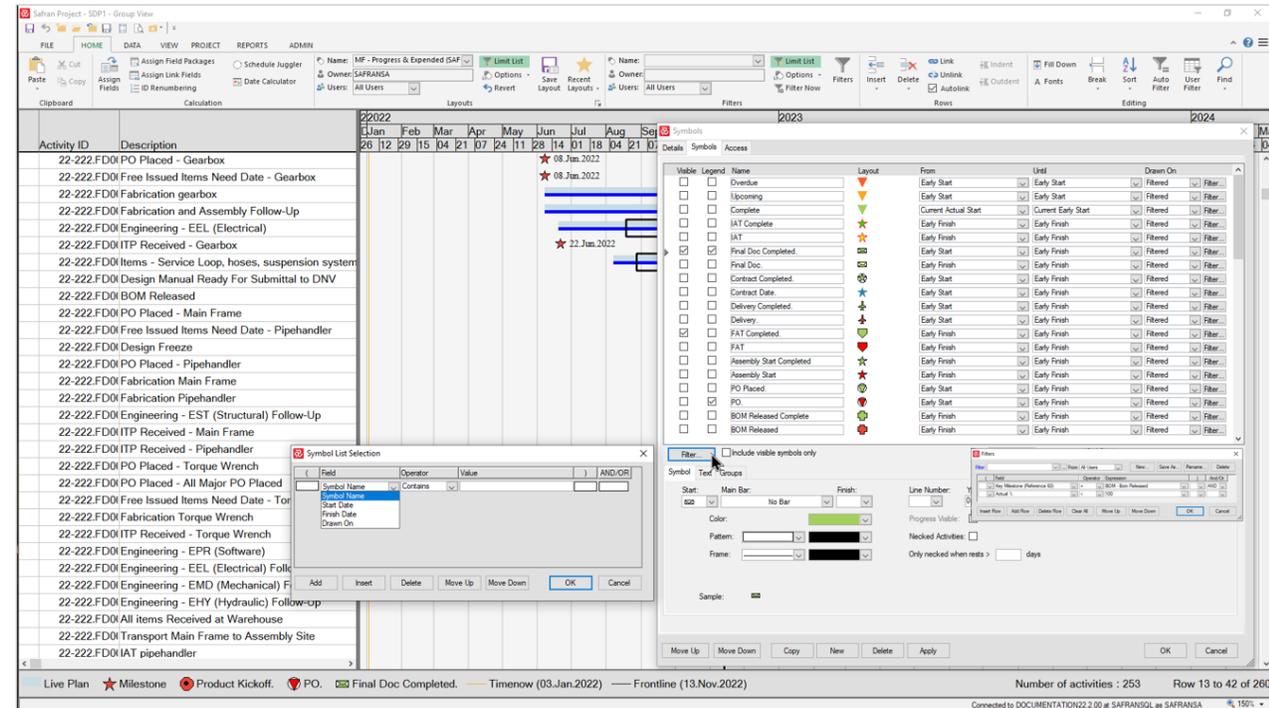
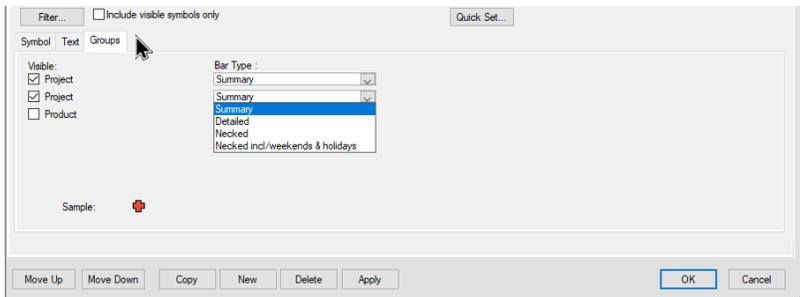
Activity ID	Description	Baseline QTY	Baseline Planned	Progress	Actual
22.222.F000-A.00PO.01	PO Placed - Pipehandler	0.0	100.0	100.0	100.0
22.222.F000-A.S0FA.00	Fabrication Pipehandler	3.000.0	0.0	10.6	0.0
22.222.F000-A.S1IA.00	IAT pipehandler	0.0	0.0	0.0	0.0
22.222.F000-A.00CD.00	Contractual Delivery Date	0.0	100.0	100.0	100.0
22.222.F000-A.00PK.00	Product kick-off	0.0	100.0	100.0	100.0
22.222.F000-A.00LL.00	Long Lead Items identified	0.0	100.0	100.0	100.0
22.222.F000-A.10PM.00	Product Management	0.0	32.5	32.5	32.5
22.222.F000-A.20PU.00	Purchasing	350.0	32.5	32.5	32.5
22.222.F000-A.00DP.01	Design Manual Ready For Submittal to DINV	0.0	100.0	100.0	100.0
22.222.F000-A.00DP.01	DVR Approved	0.0	0.0	0.0	0.0
22.222.F000-A.00DP.01	Survey Report Received	0.0	0.0	0.0	0.0
22.222.F000-A.40SE.00	Engineering - EST (Structural)	480.0	100.0	95.0	95.0
22.222.F000-A.40SE.00	Engineering - EST (Structural) Follow-Up	60.0	5.1	3.0	3.0
22.222.F000-A.40ME.00	Engineering - EMD (Mechanical)	800.0	70.7	38.0	38.0
22.222.F000-A.40ME.00	Engineering - EMD (Mechanical) Follow-Up	70.0	0.0	0.0	0.0
22.222.F000-A.40HE.00	Engineering - EHY (Hydraulic)	160.0	70.7	37.0	37.0
22.222.F000-A.40HE.00	Engineering - EHY (Hydraulic) Follow-Up	30.0	0.0	0.0	0.0
22.222.F000-A.40EE.00	Engineering - EEL (Electrical)	0.0	0.0	0.0	0.0
22.222.F000-A.40EE.00	Engineering - EEL (Electrical) Follow-Up	90.0	0.0	0.0	0.0
22.222.F000-A.40PE.00	Engineering - EPR (Software)	120.0	0.0	0.0	0.0
22.222.F000-A.40PE.00	Engineering - EPR (Software) Follow-Up	30.0	0.0	0.0	0.0
22.222.F000-A.00L2.00	Design Review Level 2	0.0	100.0	100.0	100.0
22.222.F000-A.00LF.00	Design Freeze	0.0	100.0	100.0	100.0
22.222.F000-A.00BR.00	BOM Released	0.0	100.0	100.0	100.0
22.222.F000-A.30PL.00	Items - Service Loop, hoses, suspension system et	8.101.3	49.7	10.0	10.0
22.222.F000-A.00WR.00	All Items Received at Warehouse	0.0	0.0	0.0	0.0
22.222.F000-A.00DF.00	Delivery of all items to Assembly Site	0.0	0.0	0.0	0.0
22.222.F000-A.00PO.02	PO Placed - Gearbox	0.0	100.0	100.0	100.0
22.222.F000-A.S0FA.02	Fabrication gearbox	4.551.8	44.2	44.2	44.2
22.222.F000-A.S1IA.03	IAT gearbox	0.0	0.0	0.0	0.0
22.222.F000-A.S1IA.01	IAT- Top Drive	200.0	0.0	0.0	0.0
22.222.F000-A.S1FA.00	FAT Top Drive	30.0	0.0	0.0	0.0
22.222.F000-A.70PP.00	Packing and Preservation	0.0	0.0	0.0	0.0
22.222.F000-A.00RD.00	Ready For Delivery	0.0	0.0	0.0	0.0
22.222.F000-A.70TR.00	Transport Pipehandler to Assembly Site	0.0	0.0	0.0	0.0
22.222.F000-A.00PO.03	PO Placed - Main Frame	0.0	100.0	100.0	100.0
22.222.F000-A.S0FA.03	Fabrication Main Frame	200.0	12.3	10.0	10.0
22.222.F000-A.70TR.03	Transport Main Frame to Assembly Site	0.0	0.0	0.0	0.0
22.222.F000-A.00PO.00	PO Placed - Torque Wrench	0.0	0.0	0.0	0.0
22.222.F000-A.S0FA.01	Fabrication Torque Wrench	562.5	0.0	0.0	0.0
22.222.F000-A.S1IA.02	IAT Torque wrench	0.0	0.0	0.0	0.0
22.222.F000-A.70TR.02	Transport Torque Wrench to Assembly Site	0.0	0.0	0.0	0.0

# Conditional Formatting

Symbols are also highly conditionally formattable...

Filters give you full control over which symbols/properties are visual for which activities and summary levels

List of Symbols may also be filtered

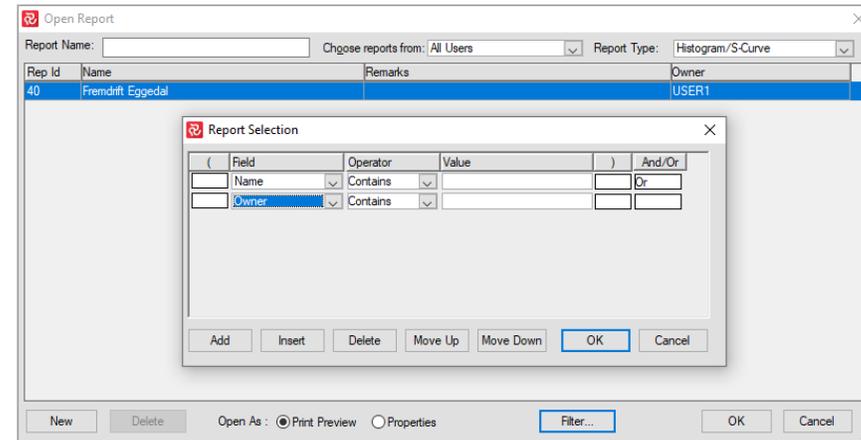
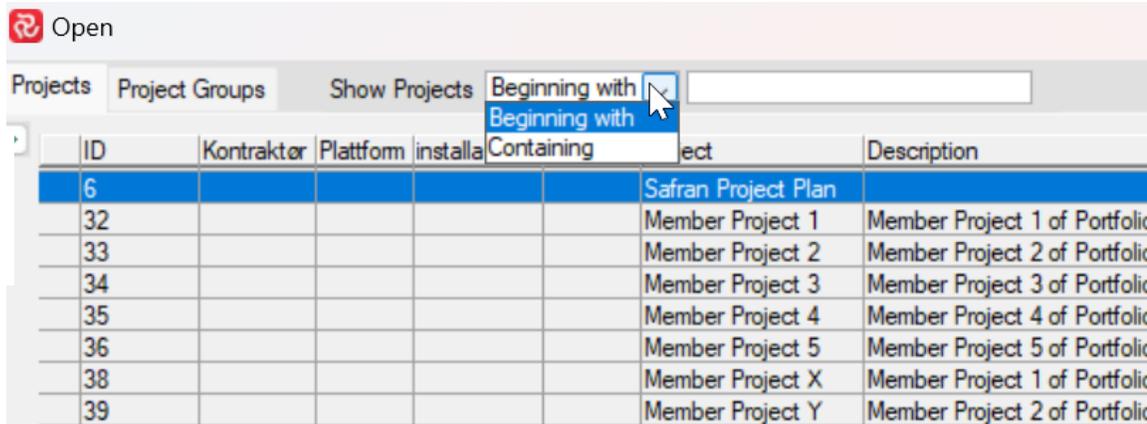
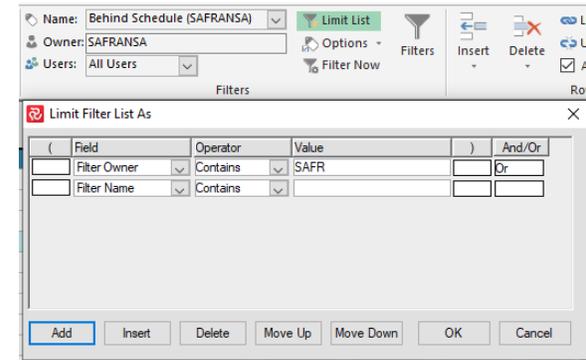
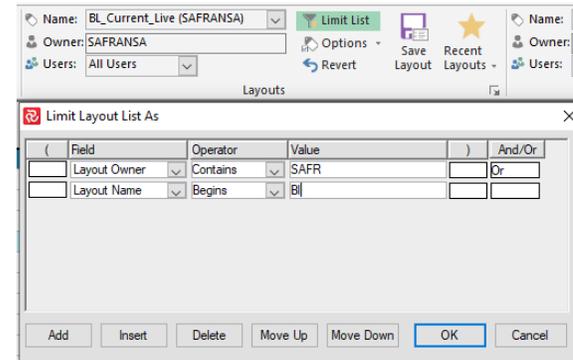


# Limit List

As number of Layouts, Filters, and Report Configurations increase dropdown lists become longer.

Limit List function makes dropdowns easier to navigate

Green background reminds you that a Layout/Filter Limit List is active



# Filter Groups

Filters may be collected in Groups to simplify use

Each Filter Group is added to the 'Users' dropdown

When a Group is selected the 'Name' dropdown shows only filters in selected Group

The screenshot displays the Safran Project software interface. At the top, the title bar reads "Safran Project - Forum 2022 Project\_2022 - Group View". The ribbon includes tabs for FILE, HOME, DATA, VIEW, PROJECT, REPORTS, and ADMIN. The ADMIN tab is active, showing icons for Calendar Sets, Profile Sets, Resource Sets, Userfield Sets, Symbol Sets, Global Sets, Rule Sets, Rate Sets, Enterprise Fields, Report Groups, Filter Groups, and Picture Manager. The Filter Groups icon is highlighted.

Below the ribbon, a table shows activity data:

Activity ID	No.	Description	Activity Status	Filter Groups	Filter Groups for the database	Finish
22-222		Small Drilling Package		5	08.06.2022	05.01.2024
FD00-A		Top Drive		2	08.06.2022	20.02.2023

An inset window titled "Filter Groups" is open, showing a list of filter groups on the left and a list of available filters on the right. The "Available Filters by User" list includes:

- SAFRANSA
- 1 High Impact
- Achieved Milestones
- Area of Concern
- Behind Schedule
- Belongs to
- Cancelled IS NULL
- Critical Path
- Float Path Order IS NOT NULL
- find
- Large Activity filter
- Large Group
- Large Group filter
- No activities
- Outline Code =
- Products
- Products in
- Progress reporting
- Remaining Work
- Succeeding Path
- Weekly Overview

Below the inset window, a dropdown menu for "Users" is open, showing the following options:

- User
- Project Users
- All Users
- Filter Group 1
- Filter group 2
- Filter Group 3

The main table below the dropdown shows the following data:

Actual %	Planned	Expended QTY	Expended QTY	Client lay
11.0		8 651.1	5 105.0	
22.9		1 190.2	1 133.0	
100.0	0.0	0.0	0.0	

# User Filter

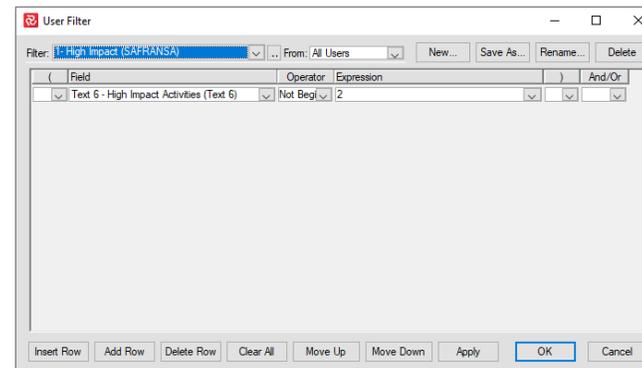
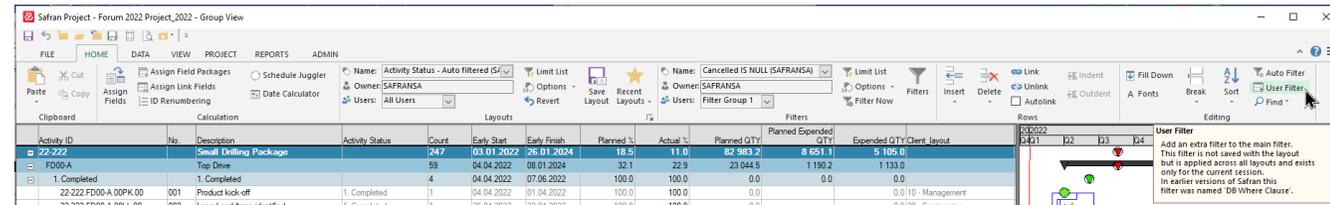
When working with large project a User Filter/Global Filter may be applied.

Previously called 'DB Where Clause'

The User Filter will be valid throughout all aspects of Safran.

A green highlight is shown when active

Subsequent Filters or Auto Filters may also be applied





# What about Safran Planner/Viewer?

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Majority of filtering capabilities are also available in both **Safran Planner** and **Safran Project Viewer**.



# What about Safran Risk/Risk Manager?

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**Safran Risk** utilizes the same/relevant filtering capabilities within the Scheduling system.

Safran Risk also has its own filtering functionality in some of the risk-oriented modules. These filters are more interactive and are associated with the user-interface.

**Safran Risk Manager** has numerous text-based filters. Some offer interactive look-up capabilities, ie. type one or more characters => DDL box selects relevant condition.

Simple filters may also be created in much the same way as Safran Project ie. build a list of conditions



# New Whitepaper

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Comprehensive document on filtering soon available

**Still Preliminary**

## Spotlight on the use of filters in Safran

A comprehensive overview of Filtering capabilities in Safran Project

# Safran Filters

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Safran Filtering – when *almost* is not an option



Thank You.