

Remaining Scopes in Safran

Initial questions

- If Safran has a predefined field for the Remaining Scope.
- What the remaining scope is.
- If the remaining scope can be related to schedules? If yes, why should we?

Scopes and Schedules in Safran

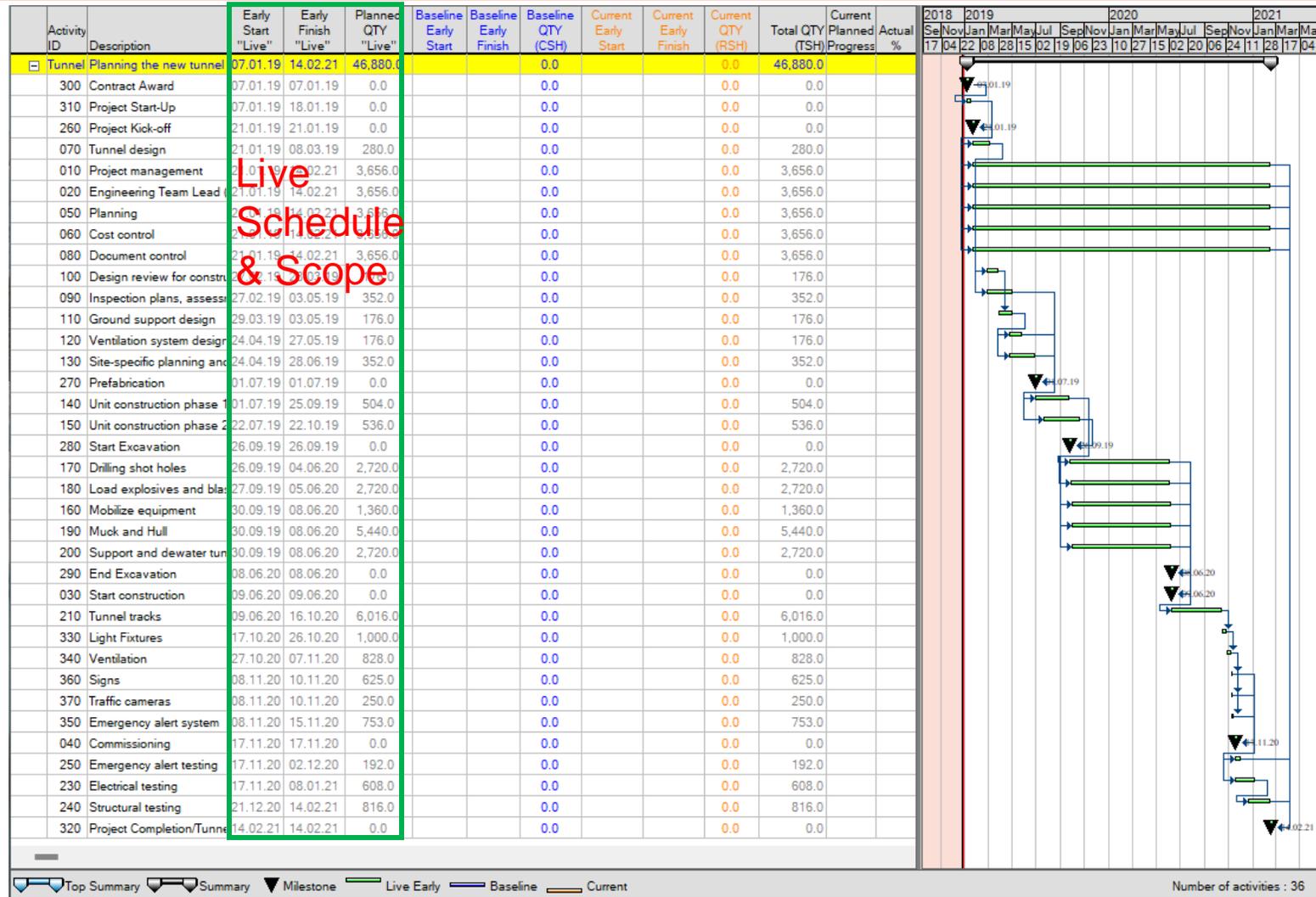
Schedules

- Live Schedule
- Baseline Schedule
- Current Schedule

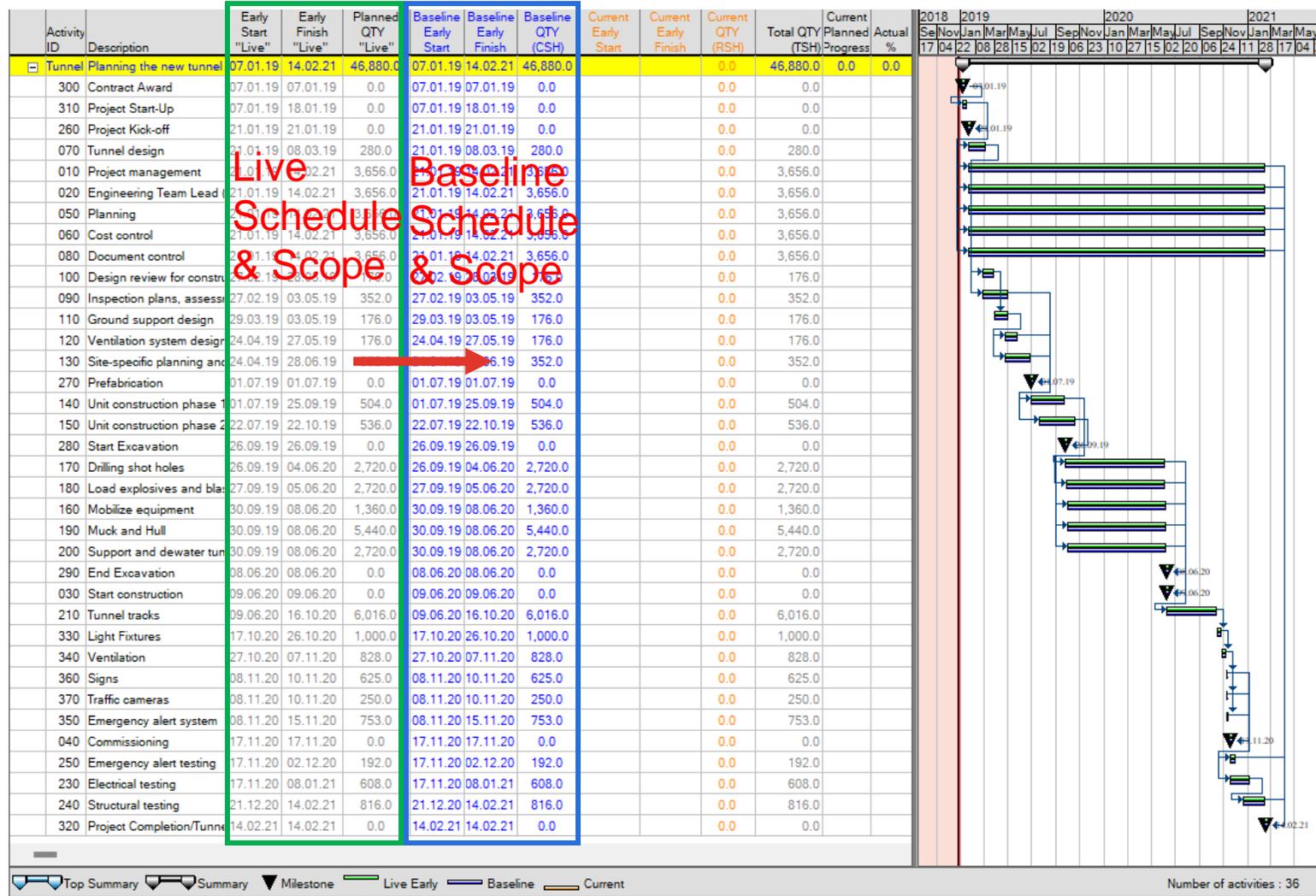
Scopes

- Live Scope (Planned QTY)
- Baseline Scope
- Current Scope
- Total Scope

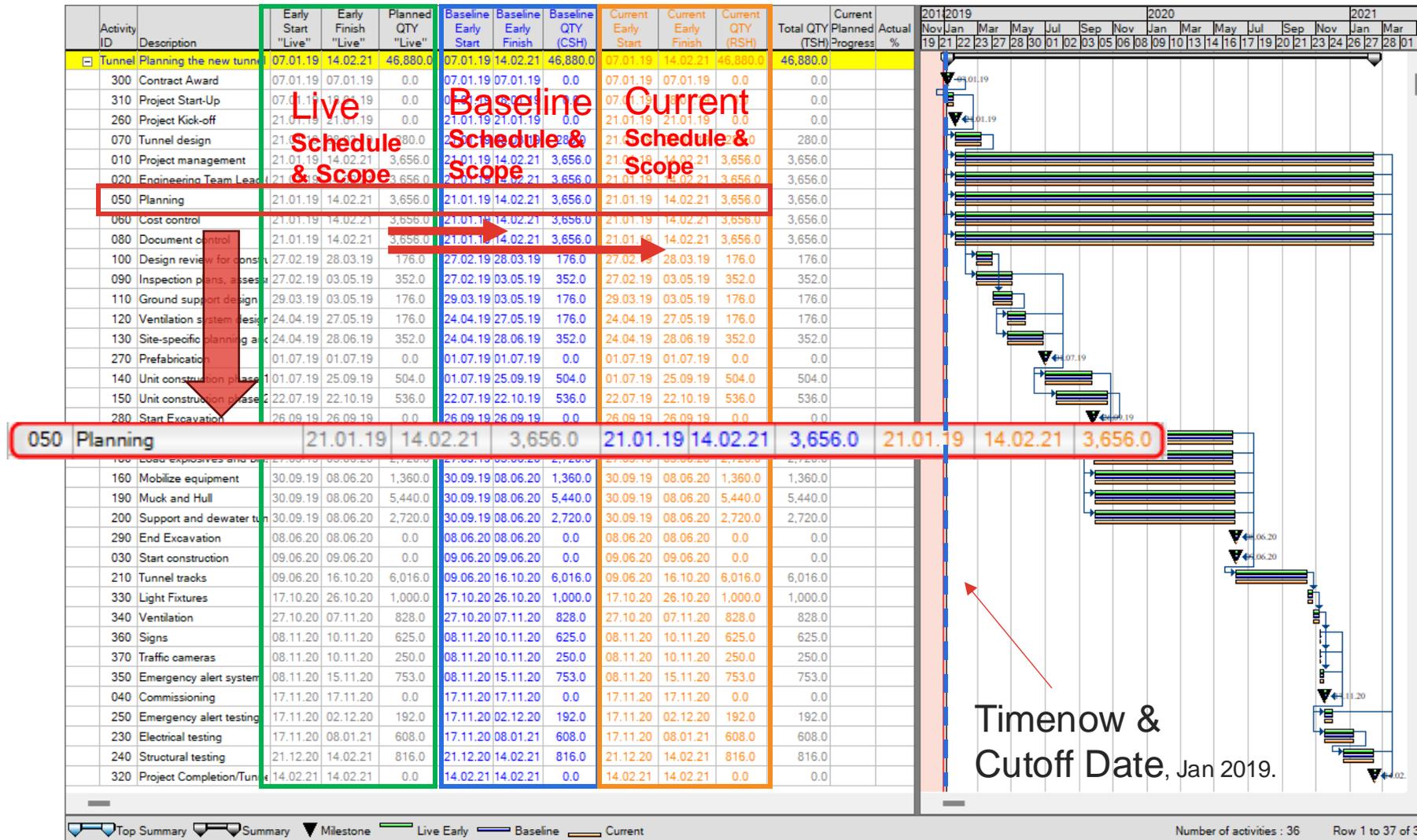
Scopes and Schedules in Safran – Live plan



Shedules in Safran Project – Baseline



Shedules in Safran Project – Current



Scope Settings

- Live Scope
- Baseline Scope
- Current Scope
- Total Scope

Properties

Details Schedule Options Progress Method Subprojects Enterprise Fields **Scope** Cutoff Dates Pictures/Texts

Field Name	Field Label	Qty Type	Include Change-types	Baseline Update	Status Update	Scope for Progress Lifting
csh	Baseline Scope	<input checked="" type="radio"/> Planned <input type="radio"/> Contract	<input checked="" type="checkbox"/> VO <input type="checkbox"/> Internal Change <input type="checkbox"/> VO-Request <input type="checkbox"/> Sub-Contracted	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
rsh	Current Scope	<input checked="" type="radio"/> Planned <input type="radio"/> Contract	<input checked="" type="checkbox"/> VO <input type="checkbox"/> Internal Change <input checked="" type="checkbox"/> VO-Request <input type="checkbox"/> Sub-Contracted	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
tsh	Total Scope	<input checked="" type="radio"/> Planned <input type="radio"/> Contract	<input checked="" type="checkbox"/> VO <input checked="" type="checkbox"/> Internal Change <input checked="" type="checkbox"/> VO-Request <input type="checkbox"/> Sub-Contracted	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Always On Schedule Againsts: Live Plan Revised Plan Baseline Plan

Lock Resource Data, Quantities, Unit Rate and Cost

Never
 When Baseline is set

Scope Handling

Auto Sum:

Lock Scope: (Changes via V.O.s)

OK Cancel

Activity ID	Description	Early Start	Early Finish	Planned QTY	Baseline Early Start	Baseline Early Finish	Baseline QTY (CSH)	Current Early Start	Current Early Finish	Current QTY (RSH)	Total QTY (TSH)
4 - Tunnel Planning the new tunnel		07.01.19	14.02.21	50,110.0	07.01.19	14.02.21	46,880.0	08.07.19	19.02.21	49,080.0	50,110.0
00	Milestones	07.01.19	14.02.21	0.0	07.01.19	14.02.21	0.0	16.07.19	19.02.21	0.0	0.0
01	Administration and Manag	07.01.19	14.02.21	19,530.0	07.01.19	14.02.21	18,280.0	08.07.19	14.02.21	19,530.0	19,530.0
02	Engineering	21.01.19	28.06.19	1,762.0	21.01.19	28.06.19	1,512.0	08.07.19	15.07.19	1,762.0	1,762.0
07C	Tunnel design	21.01.19	08.03.19	280.0	21.01.19	08.03.19	280.0	08.03.19	08.03.19	280.0	280.0
10C	Design review for construc	27.02.19	28.03.19	176.0	27.02.19	28.03.19	176.0	29.03.19	176.0	176.0	176.0
09C	Inspection plans, assessm	27.02.19	03.05.19	602.0	27.02.19	03.05.19	352.0	03.05.19	602.0	602.0	602.0
11C	Ground support design	29.03.19	03.05.19	176.0	29.03.19	03.05.19	176.0	03.05.19	176.0	176.0	176.0
12C	Ventilation system design	24.04.19	27.05.19	176.0	24.04.19	27.05.19	176.0	08.07.19	15.07.19	176.0	176.0
13C	Site-specific planning and	24.04.19	28.06.19	352.0	24.04.19	28.06.19	352.0	28.06.19	352.0	352.0	352.0
03	Casting Yard and Preparat	01.07.19	22.10.19	1,740.0	01.07.19	22.10.19	1,040.0	16.07.19	31.10.19	1,740.0	1,740.0
14C	Unit construction phase 1	01.07.19	25.09.19	904.0	01.07.19	25.09.19	504.0	16.07.19	07.10.19	904.0	904.0
15C	Unit construction phase 2	22.07.19	22.10.19	836.0	22.07.19	22.10.19	536.0	31.07.19	31.10.19	836.0	836.0
04	Construction	26.09.19	15.11.20	25,422.0	26.09.19	15.11.20	24,422.0	08.10.19	20.11.20	24,422.0	25,422.0

Top Summary Summary Milestone Live Early Baseline Current

Number of activities : 36 Row

Change Register

Safran Project - 4. - Remaining Scope - Tunnel - Group View

FILE HOME DATA VIEW PROJECT REPORTS ADMIN

Calendars Profiles Resources User fields Symbols Globals Rules Complex Rates Contract Items Change Register Linked Documents XER Export Checks Check DB Updates Timer Setup SQL Queries Access Level User Locking

Setup

Activity ID	Description	Early Start	Early Finish	Planned QTY	Current Early Start	Current Early Finish	Current QTY (RSH)
060	Cost control	21.01.19	14.02.21	3,656	15.07.19	14.02.21	3,656
080	Document control	21.01.19	14.02.21	3,656	15.07.19	14.02.21	3,656
02	Engineering	21.01.19	28.06.19	1,762	15.07.19	22.07.19	1,762
070	Tunnel design	21.01.19	08.03.19	280		08.03.19	280
100	Design review for con	27.02.19	28.03.19	176		29.03.19	176
090	Inspection plans, ass	27.02.19	03.05.19	602		03.05.19	602
110	Ground support desig	29.03.19	03.05.19	176		03.05.19	176
120	Ventilation system de	24.04.19	27.05.19	176	15.07.19	22.07.19	176
130	Site-specific planning	24.04.19	28.06.19	352		28.06.19	352
03	CASTING YARD AND PRE	01.07.19	22.10.19	1,740	23.07.19	07.11.19	1,740
140	Unit construction pha	01.07.19	25.09.19	904	23.07.19	14.10.19	904
150	Unit construction pha	22.07.19	22.10.19	836	07.08.19	07.11.19	836
04	Construction	26.09.19	15.11.20	25,422	15.10.19	06.12.20	24,432
01	Excavation	26.09.19	08.06.20	15,960	15.10.19	29.06.20	14,960
170	Drilling shot holes	26.09.19	04.06.20	2,920	15.10.19	23.06.20	2,720
180	Load explosives and	27.09.19	05.06.20	2,920	16.10.19	24.06.20	2,720

Change Register

Change Register

- VO
- VO-001 Regulatory cha
- VOR 002 Acceleration
- VO-Request
- Internal Change
- IC 001 - Extreme weat
- IC 002 - BL2 adjustme
- Sub-Contracted

Change

Vo No.: VOR 002 Acceleration Cost Rev.: 0 Type VO

Client Vo: Responsible: DBA

Dates

Issued: 21/06/2024 Accepted: 30/10/2024

Description

Project asked to accelerate prefabrication delivery.

Remarks

Resource Items Schedule Impact Linked Documents

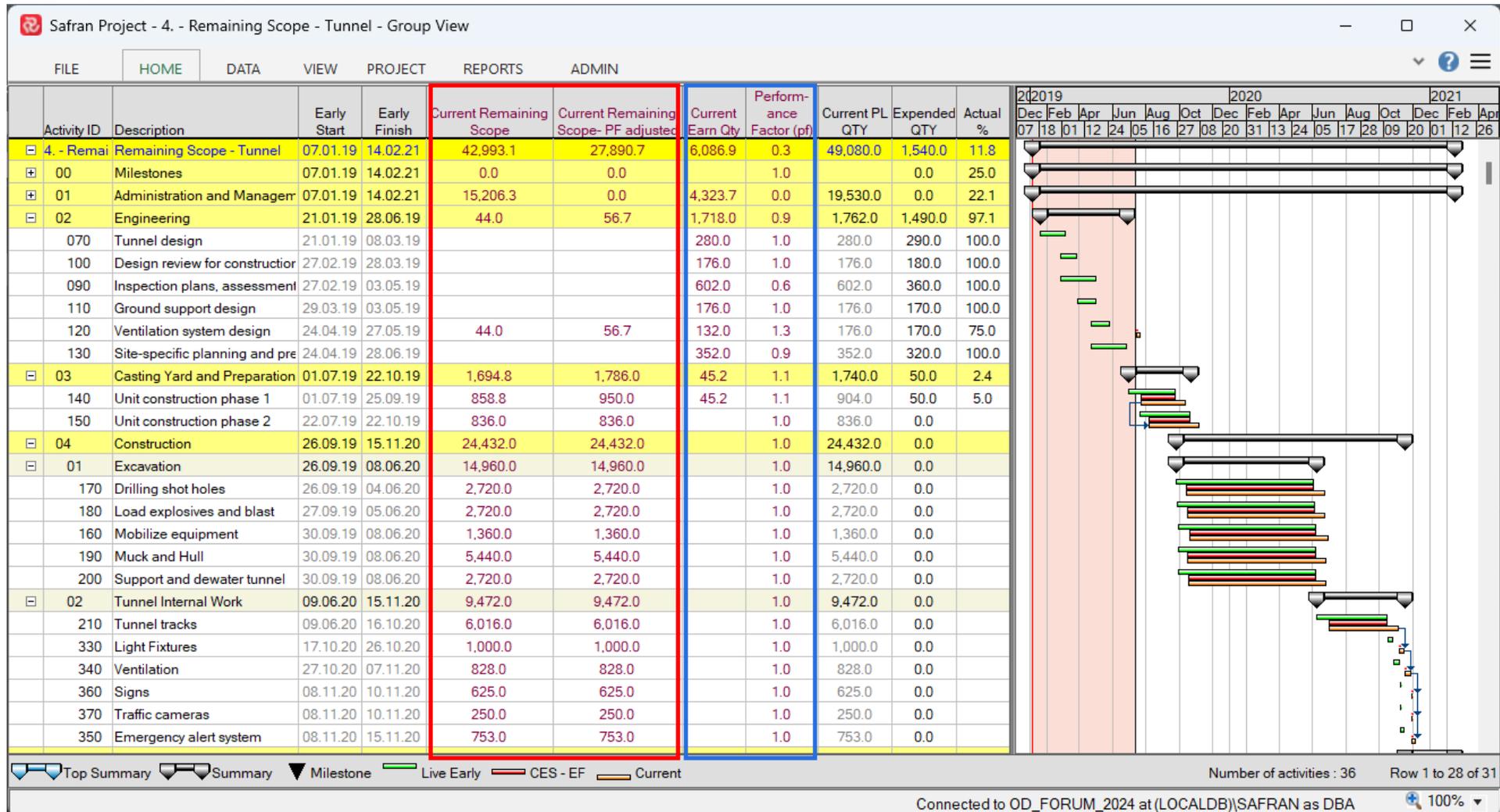
Activity ID	Resource	Type	Planned Qty	Contract Qt
050	Hrs	Total	400.0	
050	Hrs	Total	750.0	
140	Hrs	Total	400.0	
150	Hrs	Total	300.0	

Column List

Resource	Type	Planned Qty	VO Number	Vo Type
Hrs - Man hours	Total	536.0		
Hrs - Man hours	Total	300.0	VOR 002 Acceleration Cost	VO-Request

New Change Filter... Export To File... New Delete OK Cancel

Current Remaining Scope columns/fields



Current Remaining Scope

Remaining Scope = Quantity – Earned Quantity

Activity ID	Description	Current Remaining Scope	Current Remaining Scope- PF adjusted	Current Earn Qty	Performance Factor (pf)	Current PL QTY	Expended QTY	Actual %	2019						
									Dec	Mar	Jun	Se			
									01	19	09	27	15	03	2
120	Ventilation system design	44.0	56.7	132.0	1.3	176.0	170.0	75.0							

$$44 = 176 - 132$$

Earned Quantity = Quantity * (Act% / 100)

Activity ID	Description	Current Remaining Scope	Current Remaining Scope- PF adjusted	Current Earn Qty	Performance Factor (pf)	Current PL QTY	Expended QTY	Actual %	2019						
									Dec	Mar	Jun	Se			
									01	19	09	27	15	03	2
120	Ventilation system design	44.0	56.7	132.0	1.3	176.0	170.0	75.0							

$$132 = 176 * (75/100)$$

Earned QTY example

If you plan to paint a building in 100 hours, you will have earned 60 hours when 60% of it is painted.

–Regardless of how many hours you have spent!

Calculated Fields, earned quantity

The image shows a software interface with two overlapping dialog boxes. The background window is titled 'Userfields' and has tabs for 'Details', 'Userfields', and 'Access'. The 'Userfields' tab is active, showing a list of fields and configuration options. The 'Userfield Formula' dialog is open, showing a configuration for a userfield named 'Current Earn Qty'. A second, smaller 'Userfield Formula' dialog is also open, showing a formula editor.

Userfields Window:

- Field No.: 2
- Label: Current Earn Qty
- Visible: Enabled:
- Field No. (bottom):
- Inherit Label:
- Summary/Group Level Display: None Apply Function (Sum)
- Activity Level Data: Manual Input Calculated Value (Formula...)
- Save To Database:

Userfield Formula Window (Main):

- Userfield: Current Earn Qty
- Formulas: WHERE conditions in Filter... are met, then perform Formula...

Userfield Formula Window (Formula Editor):

(	Expression	)	Operator
	Current QTY (RSH)		*
(	Actual %)	/
	100		

Buttons: Add Row, Insert Row, Delete Row, Clear All Rows, OK, Cancel

Calculated Fields, Current Remaining Scope

The image shows a software interface with two overlapping dialog boxes. The background dialog is titled 'Userfields' and has tabs for 'Details', 'Userfields', and 'Access'. The 'Userfields' tab is active, showing a list of fields with columns 'Field' and 'Label'. Field N3, 'Current Remaining Scope', is selected. Below the list are options for 'Summary/Group Level Display' (None or Apply Function) and 'Activity Level Data' (Manual Input or Calculated Value). The 'Calculated Value' option is selected.

The foreground dialog is titled 'Userfield Formula' and is open for editing the formula for 'Current Remaining Scope'. It has a 'Userfield:' field containing 'Current Remaining Scope' and a 'Formulas:' section with a table:

Include Activities	Filter/Formula	Remarks
ALL	activities: Filter... to be performed by Formula...	

Below this table is another 'Userfield Formula' dialog showing the formula construction:

Current Remaining Scope (Decimal 3) =

(	Expression	)	Operator
▼	Current QTY (RSH)	▼	-
▼	Current Earn Qty (Decimal 2)	▼	

At the bottom of the foreground dialog are buttons for 'Add Row', 'Insert Row', 'Delete Row', and 'Clear All Rows', along with 'Duration Format' (None) and 'Use Calendar' (checked) options. The background dialog has 'OK' and 'Cancel' buttons at the bottom right.

Current Remaining Scope, performance (pf) based

Remaining Scope pf based = (Quantity – Earned Quantity) * pf

Activity ID	Description	Current Remaining Scope	Current Remaining Scope- PF adjusted	Current Earn Qty	Performance Factor (pf)	Current PL QTY	Expended QTY	Actual %	2019				
									Dec 01	Mar 09	Jun 27	Se 03	2
120	Ventilation system design	44.0	56.7	132.0	1.3	176.0	170.0	75.0					

$$56,7 = 44 * 1,2878789$$

Performance factor = Expended QTY / Earn QTY

Activity ID	Description	Current Remaining Scope	Current Remaining Scope- PF adjusted	Current Earn Qty	Performance Factor (pf)	Current PL QTY	Expended QTY	Actual %	2019				
									Dec 01	Mar 09	Jun 27	Se 03	2
120	Ventilation system design	44.0	56.7	132.0	1.3	176.0	170.0	75.0					

$$1,3 = 170 / 132$$

Performance factor example

If you have spent 80 hours to earn 60 hours, your performance factor is $80/60 = 1,33$.

-Below 1 is “good”, above 1 is “bad”.

Note! The Performance Index often used outside Scandinavia is simply the inverse of the Performance factor.

Calculated Fields, Performance Factor

The screenshot displays the Primavera P6 interface for configuring a calculated field. The main window is titled 'Userfields' and shows a list of fields. Field N4, 'Performance Factor', is selected. The 'Userfield Formula' dialog is open, showing the formula configuration for 'Performance Factor (Decimal 4)'. The formula is set to 'Expended QTY / Current Earn Qty (Decimal 2)'. The 'Filters' dialog is also open, showing a filter for 'Current Earn Qty (Decimal 2)' with the condition 'IS NOT NULL'.

Userfields Window:

- Reference: Text, Date, Flag, **Decimal**, Duration
- Field List:

Field	Label
N1	Decimal 1
N2	Current Earn Qty
N3	Current Remaining Scope
N4	Performance Factor
N5	Decimal 5
N6	Decimal 6
N7	Decimal 7
N8	Decimal 8
- Summary/Group Level Display: None, Apply Function
- Activity Level Data: Manual Input, Calculated Value
- Save To Database

Userfield Formula Dialog (Performance Factor):

- Userfield: Performance Factor
- Formulas:

(	Field	Operator	Expression	)	And/Or
	Current Earn Qty (Decimal 2)	IS NOT	NULL		
- Buttons: Insert Row, Add Row, Delete Row, Clear All, Move Up, Move Down, OK, Cancel

Userfield Formula Dialog (Performance Factor (Decimal 4)):

- Performance Factor (Decimal 4) =
- Expression Table:

(	Expression	)	Operator
	Expended QTY		/
	Current Earn Qty (Decimal 2)		
- Buttons: Add Row, Insert Row, Delete Row, Clear All Rows
- Duration Format: None, Use Calendar, Calendar: Activity's
- Buttons: OK, Cancel

Calculated Fields, Current Remaining Scope performance-based

The image shows a software interface with a 'Userfields' window and two 'Userfield Formula' dialog boxes. The 'Userfields' window has tabs for 'Details', 'Userfields', and 'Access'. Under 'Userfields', there are sub-tabs for 'Reference', 'Text', 'Date', 'Flag', 'Decimal', and 'Duration'. A table lists fields N1 through N8, with N5 'Current Remaining Scope-PI' selected. Below the table are options for 'Summary/Group Level Display' (None or Apply Function) and 'Activity Level Data' (Manual Input or Calculated Value). The 'Userfield Formula' dialog boxes show the configuration for the selected field. The top dialog shows the field name 'Current Remaining Scope- PF adjusted' and a table for formulas with columns 'Include Activities', 'Filter/Formula', and 'Remarks'. The bottom dialog shows the formula 'Current Remaining Scope- PF adjusted (D) = (Current Remaining Scope (Decimal 3) * Performance Factor (Decimal 4))' and options for 'Duration Format' and 'Use Calendar'.

Userfields

Details | **Userfields** | Access

Reference | Text | Date | Flag | Decimal | Duration

Field	Label
N1	Decimal 1
N2	Current Earn Qty
N3	Current Remaining Scope
N4	Performance Factor
N5	Current Remaining Scope-PI
N6	Decimal 6
N7	Decimal 7
N8	Decimal 8

Summary/Group Level Display

None Apply Function

Activity Level Data

Manual Input Calculated Value

Save To Database

Userfield Formula

Userfield: Current Remaining Scope- PF adjusted

Formulas:

Include Activities	Filter/Formula	Remarks
WHERE	conditions in Filter... are met, then perform Formula...	

Userfield Formula

Current Remaining Scope- PF adjusted (D) =

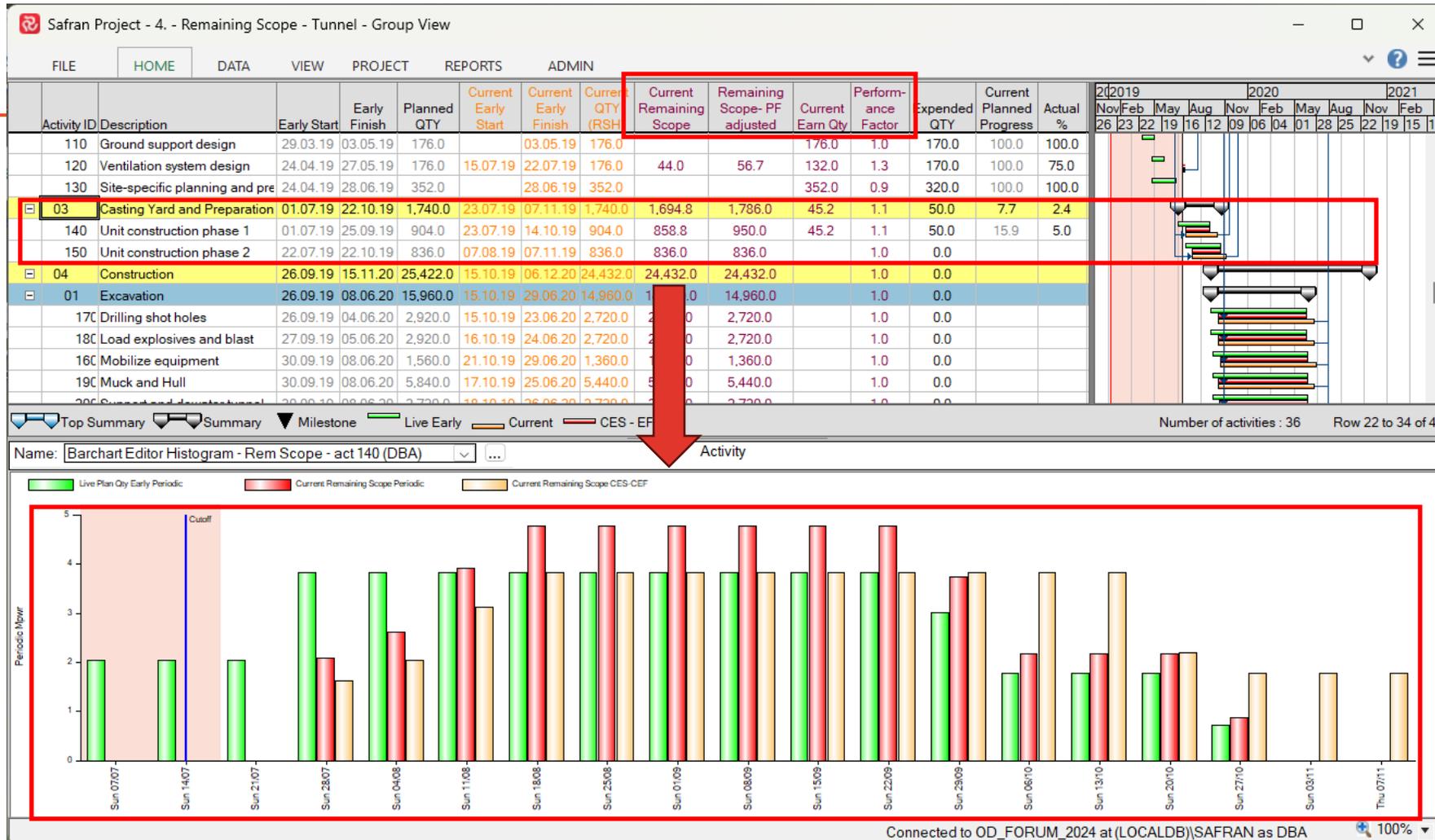
(	Expression	)	Operator
	Current Remaining Scope (Decimal 3)		*
	Performance Factor (Decimal 4)		

Add Row | Insert Row | Delete Row | Clear All Rows

Duration Format: None | Use Calendar | Calendar: Activity's

OK | Cancel

Remaining scope analysis with combined schedules and scopes



Green - Live Schedule
Early Start – Early Finish

Orange - Current Shedule
Current Early Start – Current Early Finish

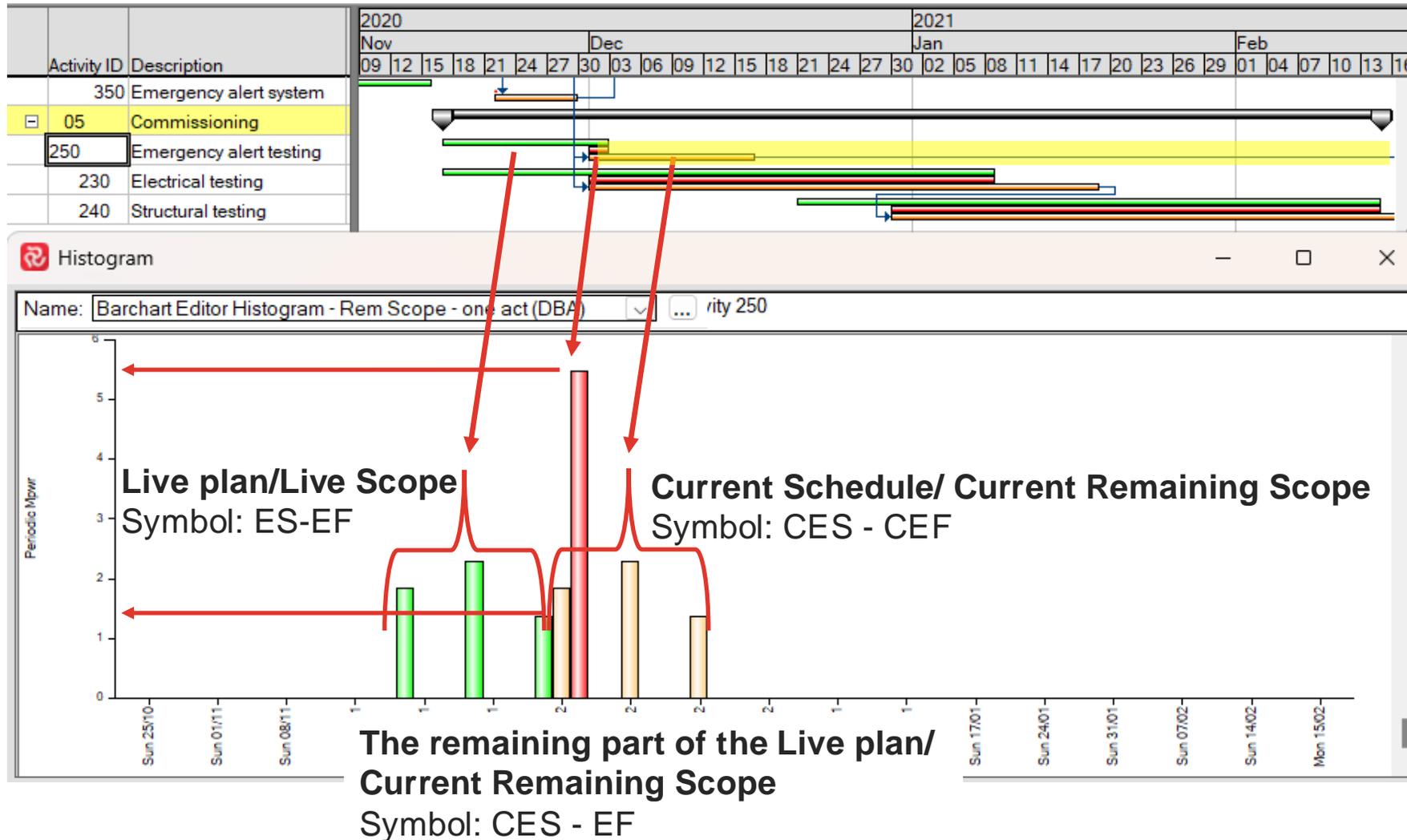
Red - “Remaining part of Live Schedule”
Current Early Start – Early Finish

Green - Live Schedule
Early Start – Early Finish
 Live Scope

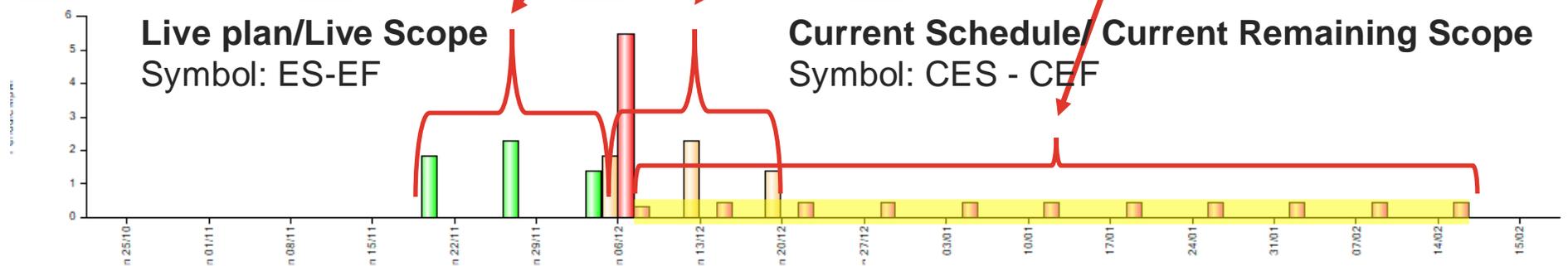
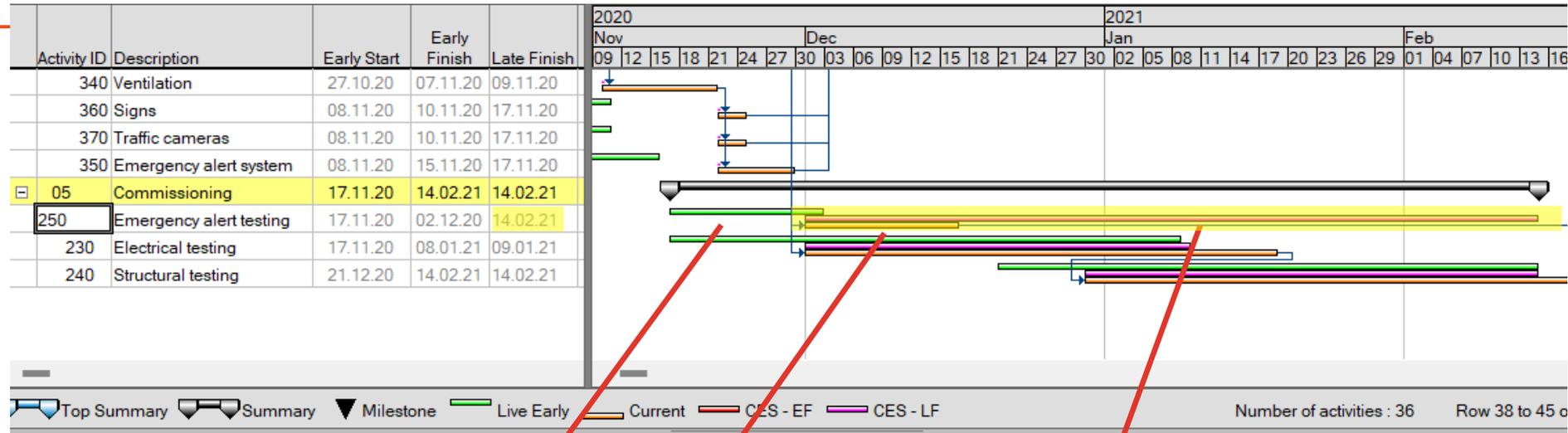
Orange, Orange - Current Shedule
Current Early Start – Current Early Finish
 Remaining Current Scope

Red - “Remaining part of Live Schedule”
Current Early Start – Early Finish
 Remaining Current Scope

Combining Remaining Scope with schedules



Combining Remaining Scope with schedules, $CES - LF$



Live plan/Live Scope
Symbol: ES-EF

Current Schedule/ Current Remaining Scope
Symbol: CES - CEF

Current Start + Float / Current Remaining Scope
Symbol: CES - **Late Finish**

Progress Summary Report vs Barchart Editor numbers

Remaining Scope

Project : 4. - Remaining Scope - Tunnel

Period 07/07/2019 - 14/07/2019 : Live Plan/Current Scope

Activity	Current Budget	Cumulative									
		Pln. %	Act. %	Plan Qty	Earn Mhrs	Exp. Mhrs	Perf. Fact (PF)	Estimate at Completion	Estimate to Completion	Remain. Work	Remain. Budget
120 Ventilation system design	176	100.0	75.0	176	132	170	1.3	227	57	44	6
Total Report	176	100.0	75.0	176	132	170	1.3	227	57	44	6

Titles Filter Report Fields Resources

Section	Column	Column	Include	Size	Background
Period	Planned Manpower	Pln. Mpw	<input type="checkbox"/>	13	
Period	Actual Manpower	Act. Mpw	<input type="checkbox"/>	13	
Cumulative	Pln. %	Pln. %	<input checked="" type="checkbox"/>	9	
	Act. %	Act. %	<input checked="" type="checkbox"/>	9	
	Planned Qty (BQWS)	Plan Qty	<input checked="" type="checkbox"/>	17	
	Earned Qty (BQWP)	Earn Mhrs	<input checked="" type="checkbox"/>	17	
	Schedule Variance / SV	Sch. Variance (SV)	<input type="checkbox"/>	13	
	Schedule Variance % / SV %	Sch. Variance (SV) %	<input type="checkbox"/>	8	
	Sched. Fact. (1/SPI)	Sched. Fact.	<input type="checkbox"/>	6	
	Sched. Perf. Index / SPI	Sch. Perf. Ix (SPI)	<input type="checkbox"/>	6	
	Actual Qty (AQWP)	Exp. Mhrs	<input checked="" type="checkbox"/>	18	
	Perf. Fact / PF	Perf. Fact (PF)	<input checked="" type="checkbox"/>	18	
	Perf. Index / CPI	Perf. Index (CPI)	<input type="checkbox"/>	6	
	Variance (Earned - Actual)	Variance	<input type="checkbox"/>	13	
	Variance %	Variance %	<input type="checkbox"/>	8	
	Variance At Compl (VAC)	Variance at Compl.	<input type="checkbox"/>	13	
	Budg. Variance (Plan-Actual)	Budget Variance	<input type="checkbox"/>	13	
	Est. At Compl. - Perf. based	Estimate at Completion	<input checked="" type="checkbox"/>	20	
	Est. To Compl. - Perf. based	Estimate to Completion	<input checked="" type="checkbox"/>	20	
	Remaining Work	Remain. Work	<input checked="" type="checkbox"/>	18	
	Remaining Budget	Remain. Budget	<input checked="" type="checkbox"/>	18	
Next Per.	Period Planned %	Per. Pln. %	<input type="checkbox"/>	8	

Remaining space (out of 278): 19

New Report Open Report... Save Save As... Preview OK Close

Activity ID	Description	Current Planned Progress	Actual %	Current Plan QTY	Current Earn Qty	Expended QTY	Performance Factor	Remaining Scope- PF adjusted	Current Remaining Scope
120	Ventilation system design	100.0	75.0	176.0	132	170	1.3	57	44.0

2019											
Dec	Feb	Apr	Jun								
19	15	11	10	06	03	30	26	2			

Summary

- Does Safran have a predefined Remaining Scope field/column?
 - No, these columns/fields must be calculated based the project needs.
 - Once created, they can be made available for all projects.
- What is the remaining scope?
 - The answer depends on what scope you want the remaining of.
 - If a performance factor should be used in the calculation, which verdict should it be..
- Can remaining scopes be related to different schedules, and why should we?
 - Yes, for instance, in histogram reports for analytic purposes.



Thank You.

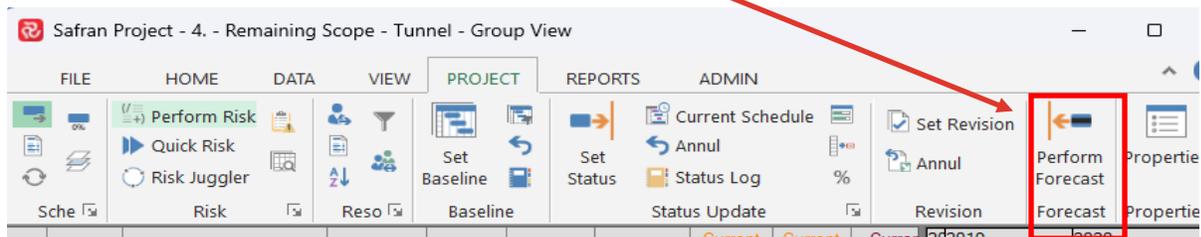
For questions and/or discussion, please visit our Safran Project demo stand in one of the coffee breaks.



Thank You.

For questions and/or discussion, please visit our Safran Project demo stand in one of the coffee breaks.

And, if interested in more future analysis, please try out the existing Forecast functionality in Safran..



Question from after the presentation

There was one question after the presentation:

“What is the difference between the Live Scope and the Total Scope”

The image shows two screenshots from a software application. The left screenshot is the 'Properties' window, which has a 'Scope' tab selected. It contains a table with columns for 'Field Name', 'Field Label', 'Qty Type', 'Include Change-types', 'Baseline Update', 'Status Update', and 'Scope for Progress Linking'. Three rows are visible: 'csh' (Baseline Scope), 'rsh' (Current Scope), and 'tsh' (Total Scope). The 'Total Scope' row has 'Planned' selected under 'Qty Type' and 'VO', 'VO-Request', and 'Internal Change' selected under 'Include Change-types'. A red box highlights the 'Total Scope' row, and a red arrow points from it to the right screenshot.

The right screenshot is the 'Change Register' window. It shows a list of changes with columns for 'Item ID', 'Change ID', and 'Change Description'. The list includes: 'VO', 'VO-001 Regulatory change', 'VO-Request', 'VOR 002 Acceleration', 'Internal Change', 'IC 001 - Extreme weather', 'IC 002 - BL2 adjustment', and 'Sub-Contracted'. A red box highlights the entire list, and a red arrow points from the 'Total Scope' row in the left screenshot to this box.

Below the 'Change Register' window, there is a 'Change' form with fields for 'Vo No.: VOR 002 Acceleration Cost', 'Client Vo.', 'Dates Issued: 21/06/2024', 'Description: Project asked to accelerate prefabrication delivery', and 'Remarks'.

That's a good question because the “Total” name can be confusing. The Total Scope is a configurable scope regarding which changes it shall include. In the example above, the Total Scope is similar to the Live Scope because it includes all the change categories that are in use in the change register. The values in the Total Scope are only updated after a Baseline or Status update, while the live scope is updated instantly when budget changes are added to the schedule.