Evaluation Center 

State of the art development cycle support for applicators

Preview

To put it very simple: The execution speed of software depends on the number of available cores, number of threads used, CPU frequency, and available RAM.

CPU name	Threads	Up to [GHz]
Core i9-14900HX	**32**	5,8
Core Ultra 7 155H	**22**	4,8
Core Ultra 5 135H	**18**	4,6
Core i7-1185g7	**8**	4,8
Core i5-8350u	**8**	3,60

In contrast to other known software packages, Evaluation Center processes measurement data with all available threads of a given CPU.

This feature speeds up execution time versus known software packages by a factor of 8 to 32.

For processed files with just a few additional measurements Evaluation Center is even faster.

Please, discover now how this is achieved…

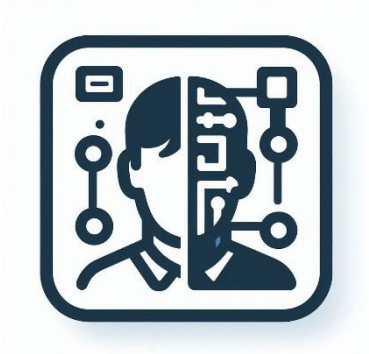
Typical problems with data analysis / Statements from users

„Runtimes are too long and I hope the program doesn’t crash!“

„I have various files with various signal names and units!“

„My script is running each file sequently!“

„In Finnland i need an evaluation in the car!“



„We need one tool for big and quick analysis!“

„I have to write my own evaluations because programmers don’t understand my needs!”

„I need a validated tool!“

Your benefits with Evaluation Center

Top 1

Clycle time reduction

Top 2

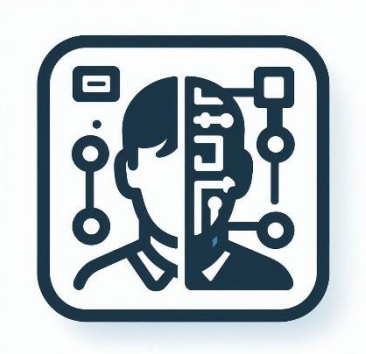
Tool for fleet evaluations

Top 3

Full use of multicore capabilities

Top 4

Offline Tool for world wide usage



UI: Standalone & Concerto Add-In

Support by experts & optional AI

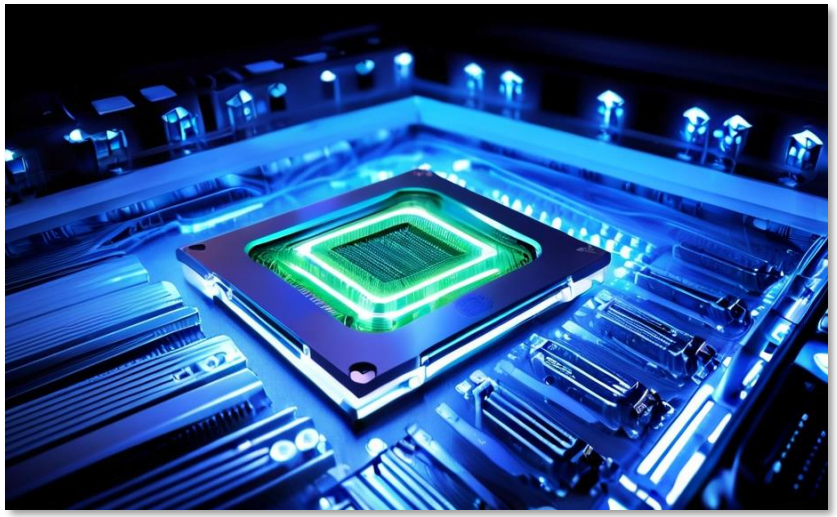
Assured quality through unit tests

Martin Hübner | huebner.martin@gmx.de | 16.01.2025 |

Processing of a huge amount of files: Multithreading and elapse time of runs

COMPUTATION ON ALL CPU CORES* WITH RAM-CPU-LIMITATION-FUNCTION

ELAPSE TIME OF DEMO EVALUATION: 100 GB IN 37 MINUTES* @I5-8350U



```
### Multithreading in process ###
Evaluation: demo3_testdaten
Thread 10-17 of 39 : 25%   Speed: 338GB/h

#####################################################
#                                                   #
#   Don't close this window during processing!      #
#                                                   #
#####################################################

C:\Users\[redacted]\Desktop\Testdaten\Testdatei_vehicle1_7.dat
C:\Users\[redacted]\Desktop\Testdaten\Testdatei_vehicle1_8.dat
C:\Users\[redacted]\Desktop\Testdaten\Testdatei_vehicle1_9.dat
C:\Users\[redacted]\Desktop\Testdaten\Testdatei_vehicle2_1.dat
C:\Users\[redacted]\Desktop\Testdaten\Testdatei_vehicle2_10.dat
C:\Users\[redacted]\Desktop\Testdaten\Testdatei_vehicle2_11.dat
C:\Users\[redacted]\Desktop\Testdaten\Testdatei_vehicle2_12.dat
C:\Users\[redacted]\Desktop\Testdaten\Testdatei_vehicle2_13.dat
```

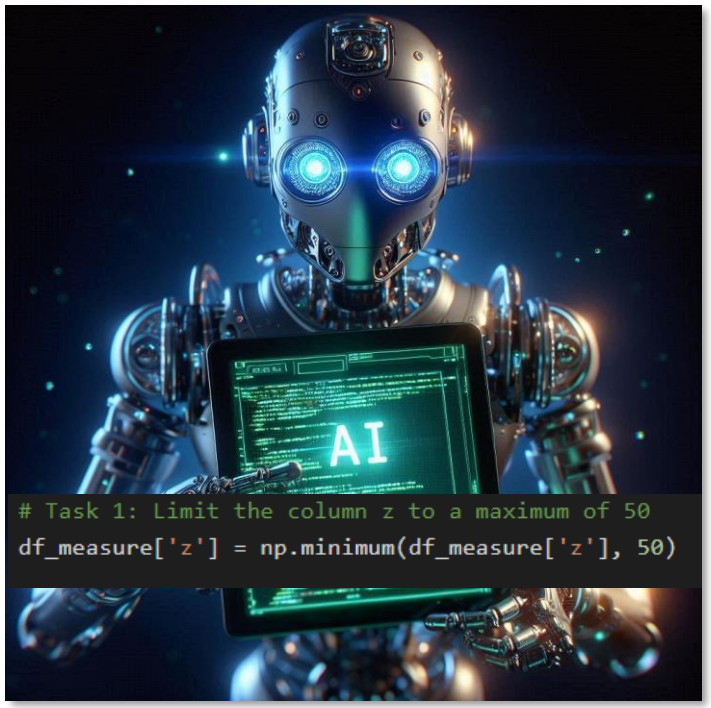
*) With performance option

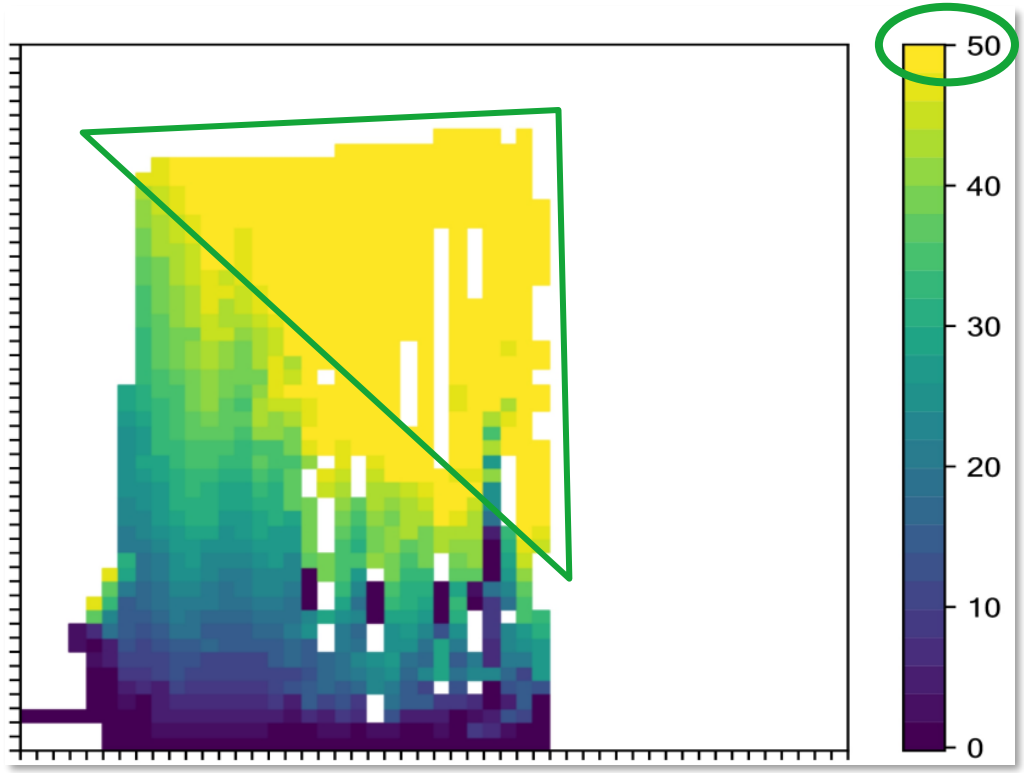
Artificial Intelligence support for scripting

ONLINE AI SUPPORT FOR SCRIPTING BY API'S (WITH ADDITIONAL ACCESS KEY)

NO SIGNALS GOES TO THE CLOUD, ONLY THE DESIRED EVALUATION COMMAND

„Limit my data in column z to 50"





The Evaluation Center as standalone application

Get your results in 5 steps:

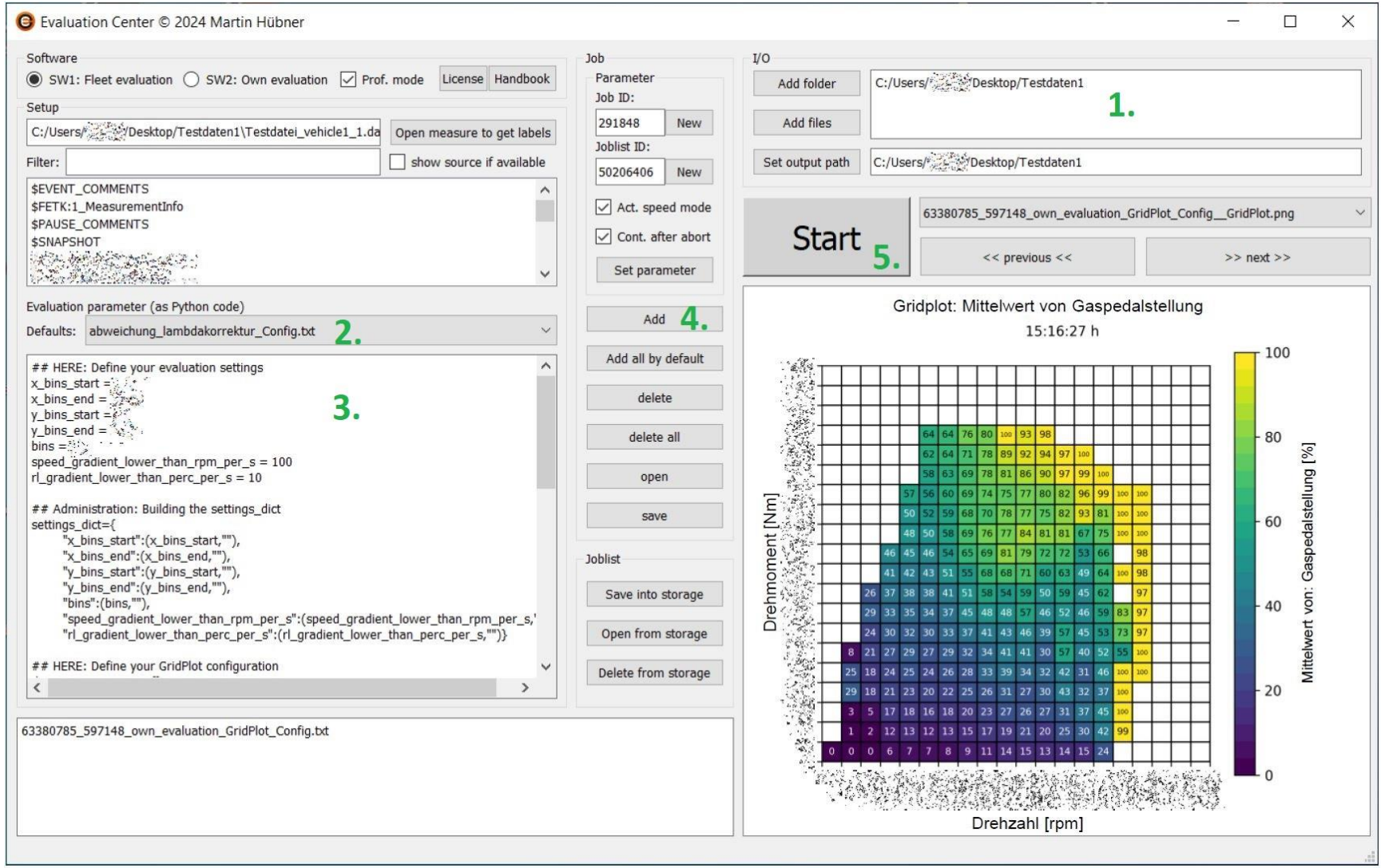
1) DEFINE INPUT AND OUTPUT

2) SELECT JOB TO PROCESS

3) ADJUST YOUR PARAMETERS

4) ADD JOB TO JOBLIST

5) PRESS START-BUTTON



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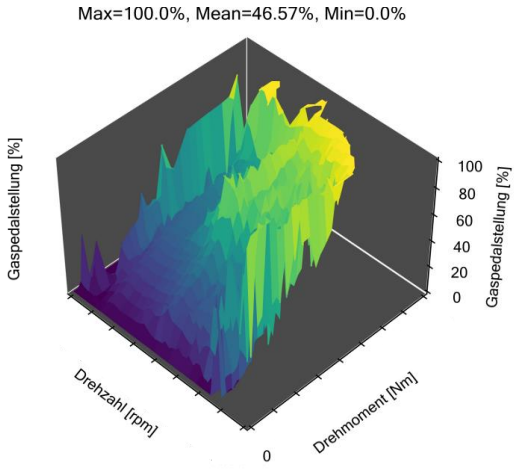
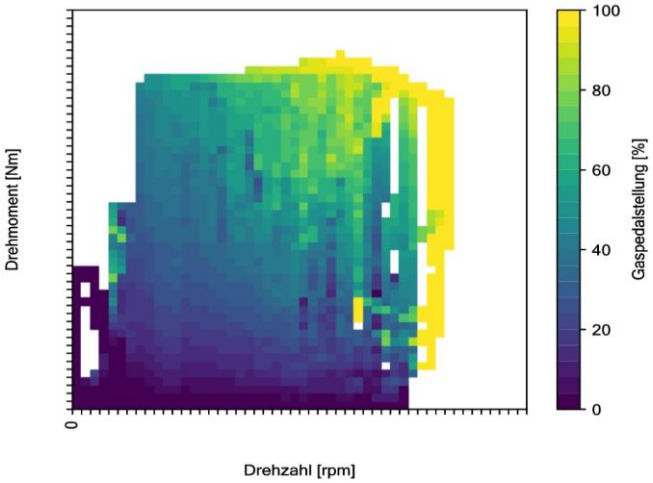
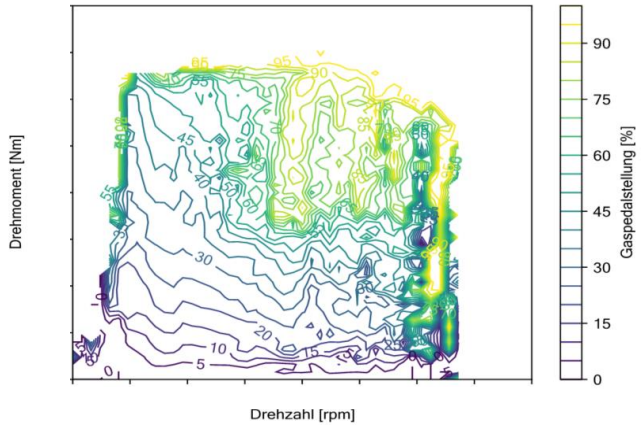
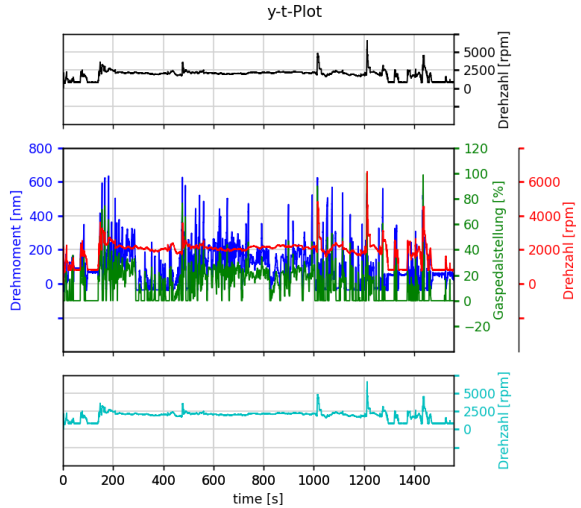
Fleet evaluation standard diagrams

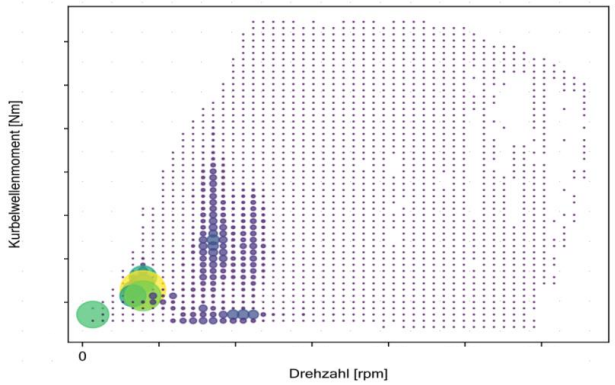
Various data classification in 3D, 2D, 1D and also time based plots

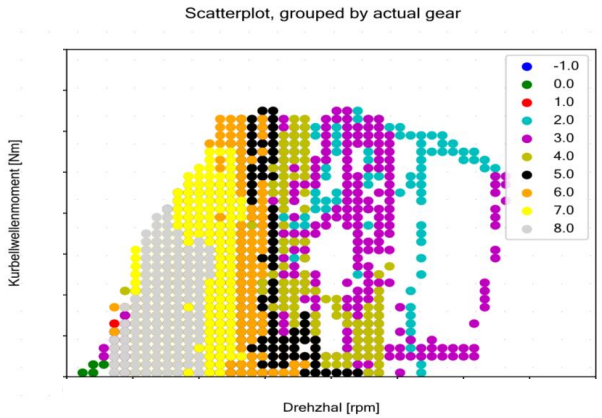


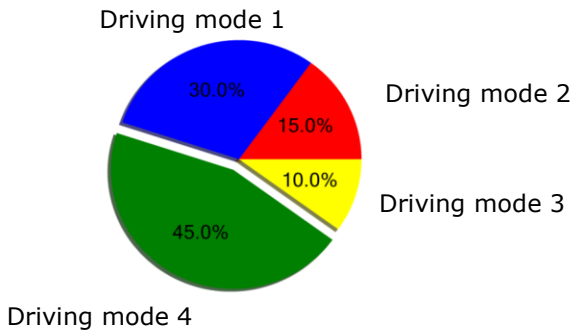


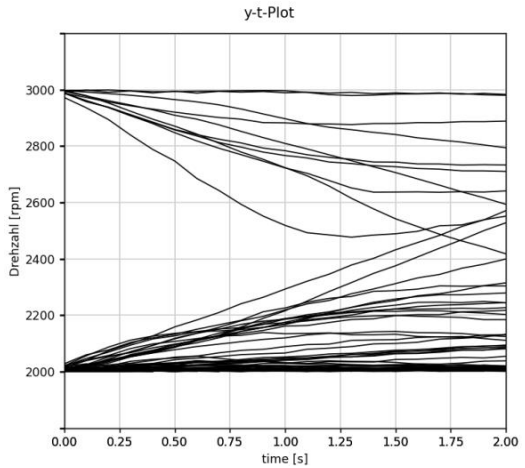








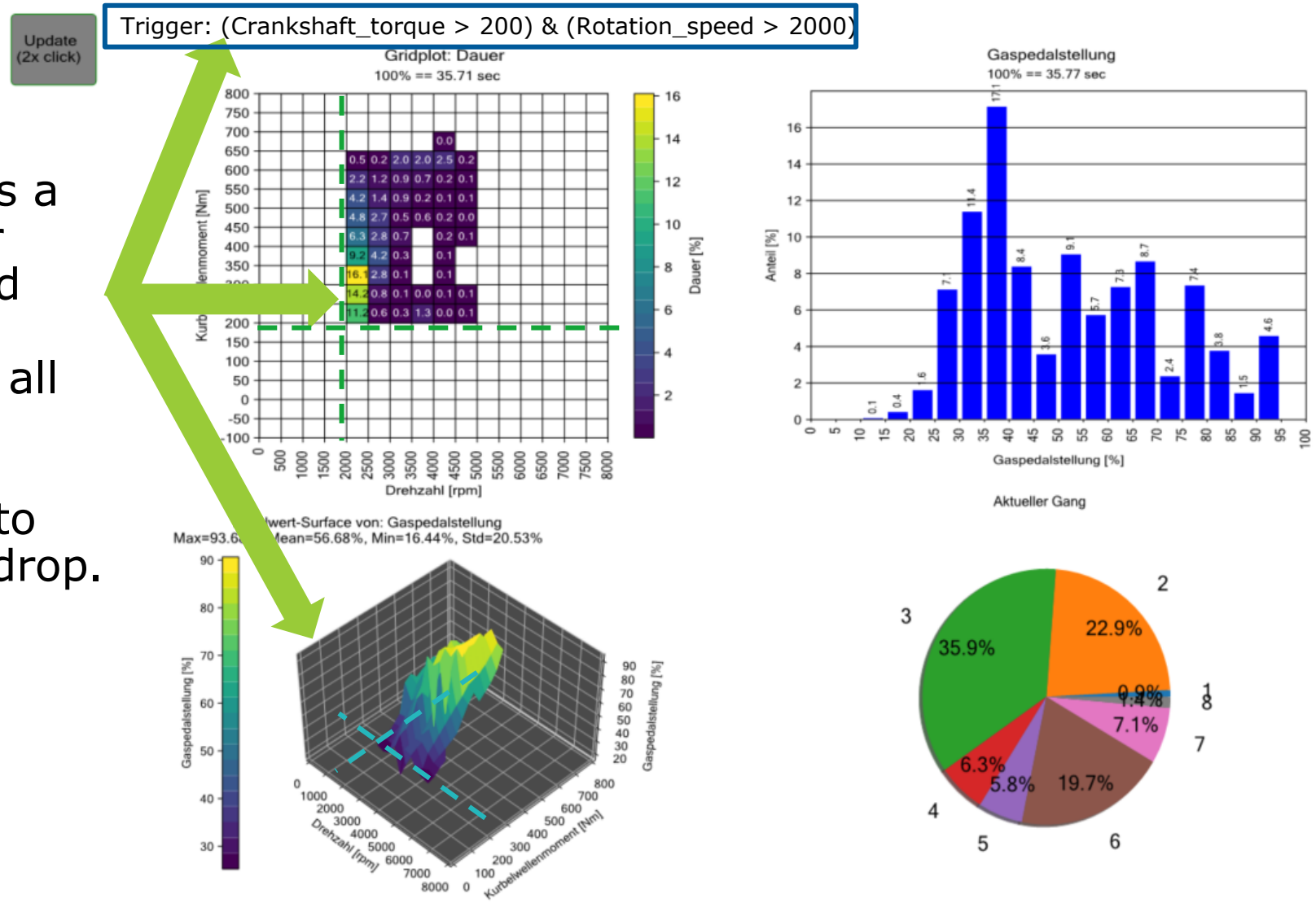




Usage of manual filter conditions

The trigger is a manual filter condition and offers data selection for all diagrams !

With Concerto all by drag&drop.



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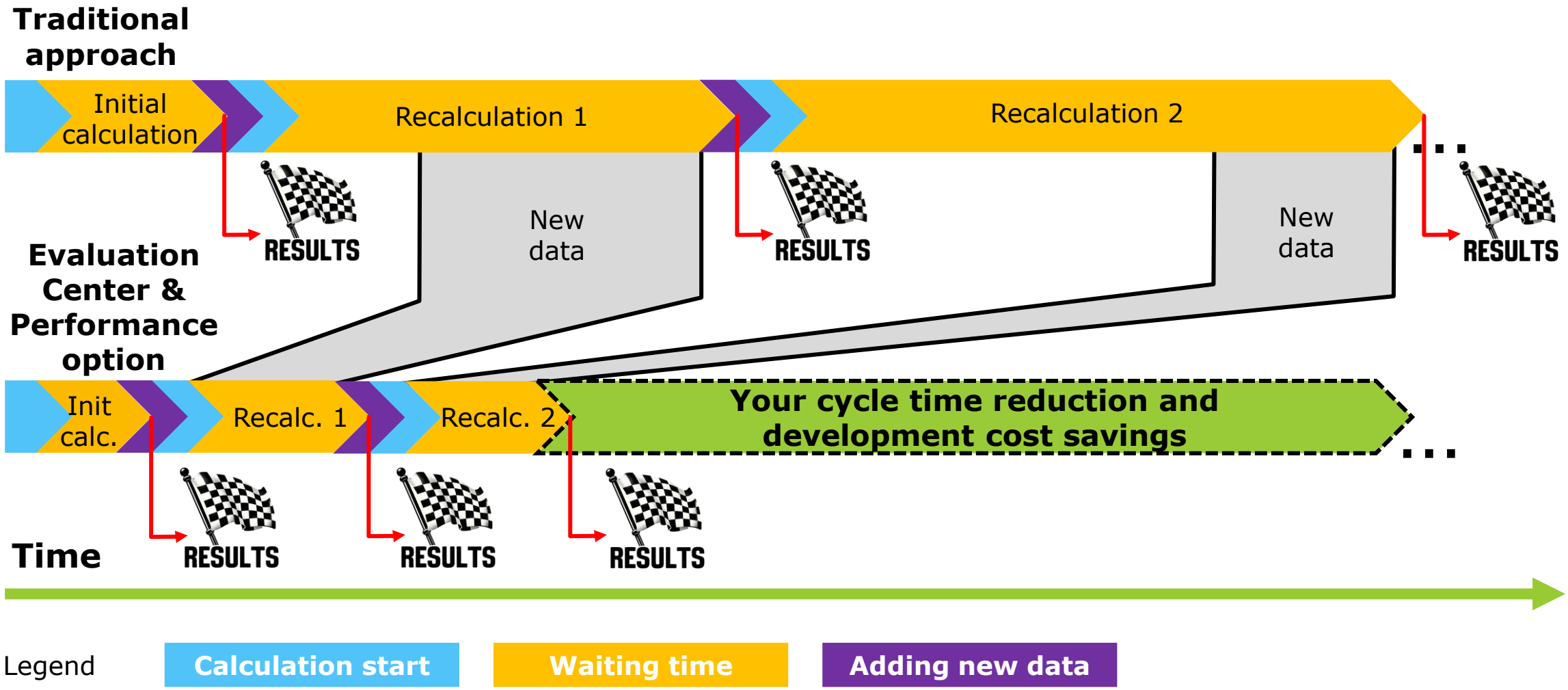
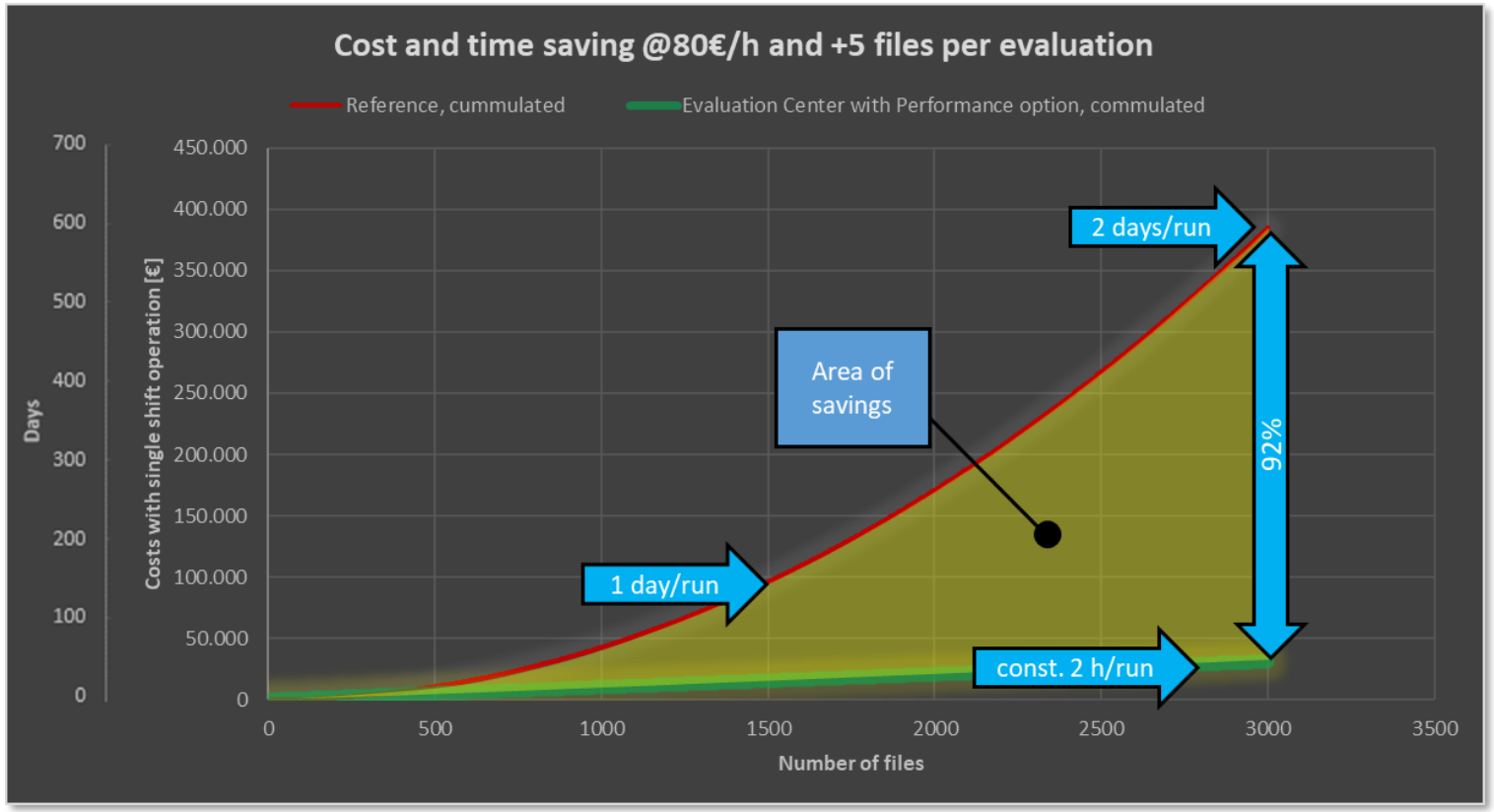
Traditional approach vs. Evaluation Center



Your savings by a user story:

- **Just one** fleet measurement, **one** evaluation by **one** user
- 5 new files from your testing team for re-evaluation
- The test ends with 1500 GB and 3000 measurement files
- The example evaluation computes 700 signals at 10ms sample rate



Observation

- **Square vs. Linear**
- **Saving of 92%: 354.000€**
- Saving rises extremly with smaller count of new files
- Saving rises linear with number of
  - Evaluations
  - Measurment tasks
  - Users
- **Compared the license costs are small**

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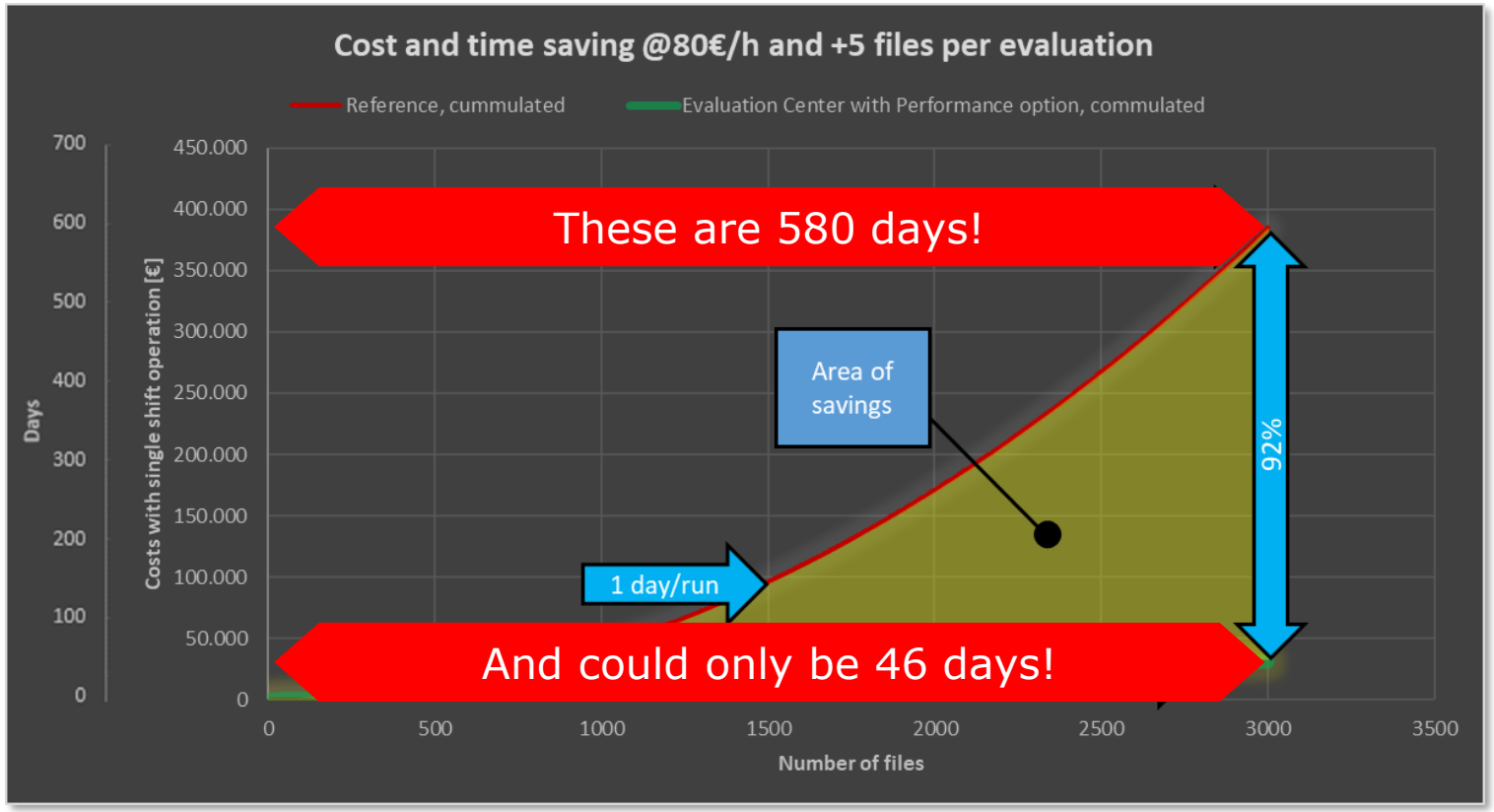

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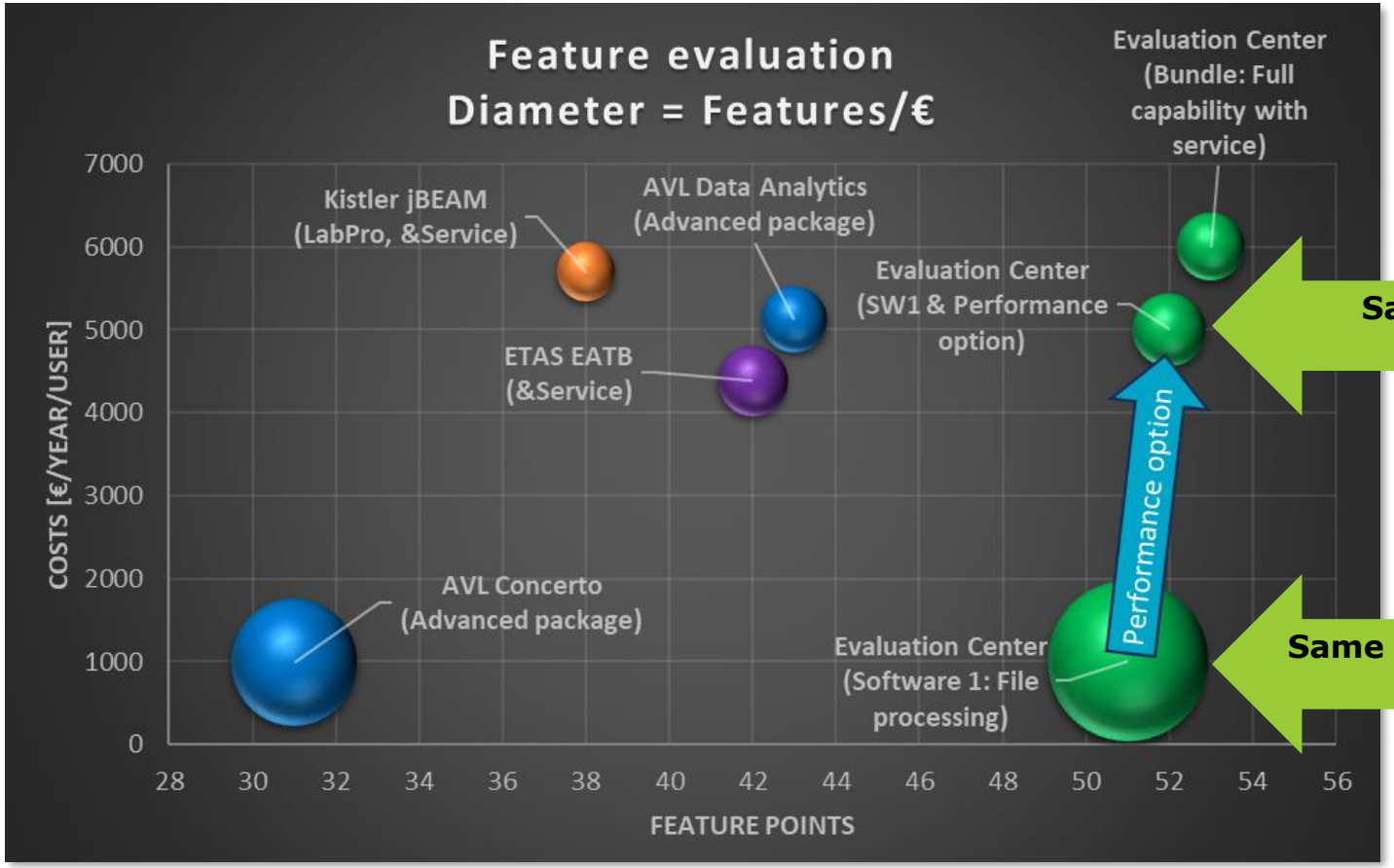
Feature Evaluation and pricing

USP: HIGH CALCULATION SPEED BY PERFORMANCE OPTION

EVALUATION CENTER HAS A BIG PORTFOLIO



Same price but faster than competitors

Same speed but 80% cheaper than competitors

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Summary: Evaluation Center


Cycle time reduction and developement cost savings


Fleet evaluations without limit on file count


Multicore support by performance option


Offline Tool (no internet connection)

- High calculation speed for new files
- Support by experts and optional Artificial Intelligence
- AVL Concerto option

Let’s think big, internally and externally.

Thank you

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www.hybersoftsolutions.de

Pricing

We can offer a one-year license agreement for laptops with an initial trial period of 1 month.
The prices will be guaranteed for a period of three years.

Option	Feature	Prices per user
Basic Software 1 *1	File processing (e.g. Fleet evaluation)	1000 €/Year
Basic Software 2 *1	User experience (Diagram generation)	1000 €/Year
Performance option	Very high speed up after initial calculation *2	4000 €/Year
Maintenance service	Updates, Upgrades, Hotfixes	1500 €/Year
Expert Consulting	• Getting online live support • Getting evaluations acc. your specification	1000 €/day
Bundle	**Basic Software 1&2 , Performance option and Maintenance service**	**6000 €/Year** (Is -20% discount)

*1) The licenses are bound to your username, userdomain and MAC-Address.
The licenses are not transferable, just in case of getting a new hardware.
*2) In case of partially evaluatable results.

Features of Evaluation Center and competitors

							Basic SW1 Scripting	Basic SW2 UserExperience Phasen	Basic SW2 UserExperience Statistics
Feature	**ETAS MDA**	**ETAS EATB**	**Kistler jBEAM**	**AVL Data Analytics**	**AVL CONCERTO 5**	**Evaluation Center**	**Evaluation Center feature availability**		
Analysis of measurements and visualization	+	+	+	+	+	+	•	•	•
Processing of high amount of files	-	+	+	+	0	+	•	•	•
LLM-Supporting by evaluation-scripting in python-code (external,optional)	-	-	-	-	-	+	•		
Multicore-App with RAM limitation functionality	-	evaluations parallized	partly by filtering	evaluations parallized	-	+	•		
Duration of processing	-	not rated, single core	not rated, single core	not rated	single core	+	fast	fast	fast, duration scaled by diagram count
Statistical diagrams	-	+	+	+	+	+	•	•	•
Fast and easy start of analysis jobs	0	+	+	0	+	+	•	•	•
Trigger creation by drag&drop	0	+	+ (by config window)	+	0	+		•	•
Free adjustable plot settings	0	+	+	+	+	+	•	•	•
Very high calculation speed!* (Optional feature)	-	-	-	-	-	**+**	•	"just" multithreading	"just" multithreading
Calculation is abortable with restarted from last point of calculation	-	-	-	-	-	**+**	•		
Fast customer orientated creation of diagrams	-	+	0	+	0	+	•	•	•
Calculation over all input files	-	+	+	+	0	+	•	•	•
Calculation of just new files including recent files	-	0	0	+	-	see opt. Feature	•		
Signal selection, usage of alternative signals or replace valaues	-	+	+	+	+	+	•	•	•
Unitmapping (e.g. 1mph + 1km/h ==> 1,61km/h + 1km/h)	-	by script, not automatic	+	+	+	+	•	•	•
Direct visualization of time-bases sections ("phases")	-	+	by template	0	-	with AVL Concerto	•	•	•
Zoomable layout (zoom in, zoom out, shift left, shift right)	+	+	+	+	+	with AVL Concerto	•	•	
Process your joblists	-	+	+	+	0	+	•		
Validation by unittests	-	+	+	+	-	+	•		
Input formats: .mf4, .mdf, .dat, additional by arrangement	+	+	+	+	+	+ (and .xlsx, .xls, .csv)	•	•	•
Output format: PDF, PNG, Excel	-	+	+	+	+	+	•		
Documentation of parameters and file information in the output	-	+	by template	0	+	+	•		
Unique connection between results and jobs	-	+	by template	+	0	+	•		
Online tool	-	-	other program	+	-	-	"It's no bug, it's a feature!"		
Offline tool	+	+	+	-	+	+	•	•	•
No limit by coding lines	+	+	+	+	+	+	•	•	•

From 2024.08.01

Legend:

+	: very good / faster
0	: neutral
-	: not available / slower

*) This is valid after a initial calcuclation of a huge number of files and for adding some new files. In case of a partially evaluatable result.

Interfaces for customers

Software 1
Fleet evaluation:

e.g. script
demo_testdaten.py

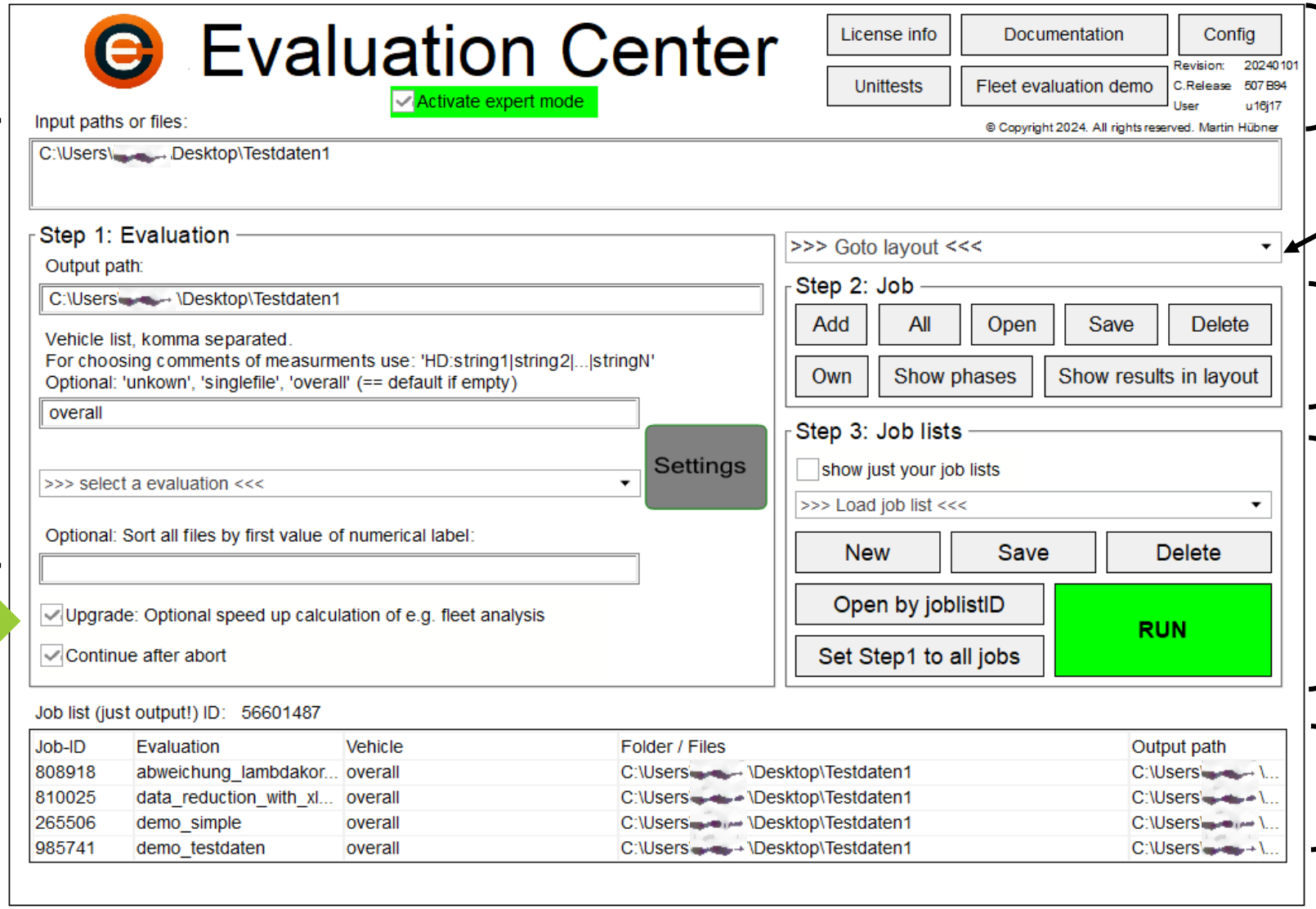
Software 2
Own evaluation:

In Concerto with
Drag&Drop
+
ClickClick
=
Result finished

CONCERTO
Layout creation

Martin Hübner | huebner.martin@gmx.de | 16.01.2025 |

Basic Software 1:
File processing user interface for AVL Concerto



Tool management

Open a predefined evaluation

Add the job to the job-list or manage a existing job. Open the phases or layout to a existing result.

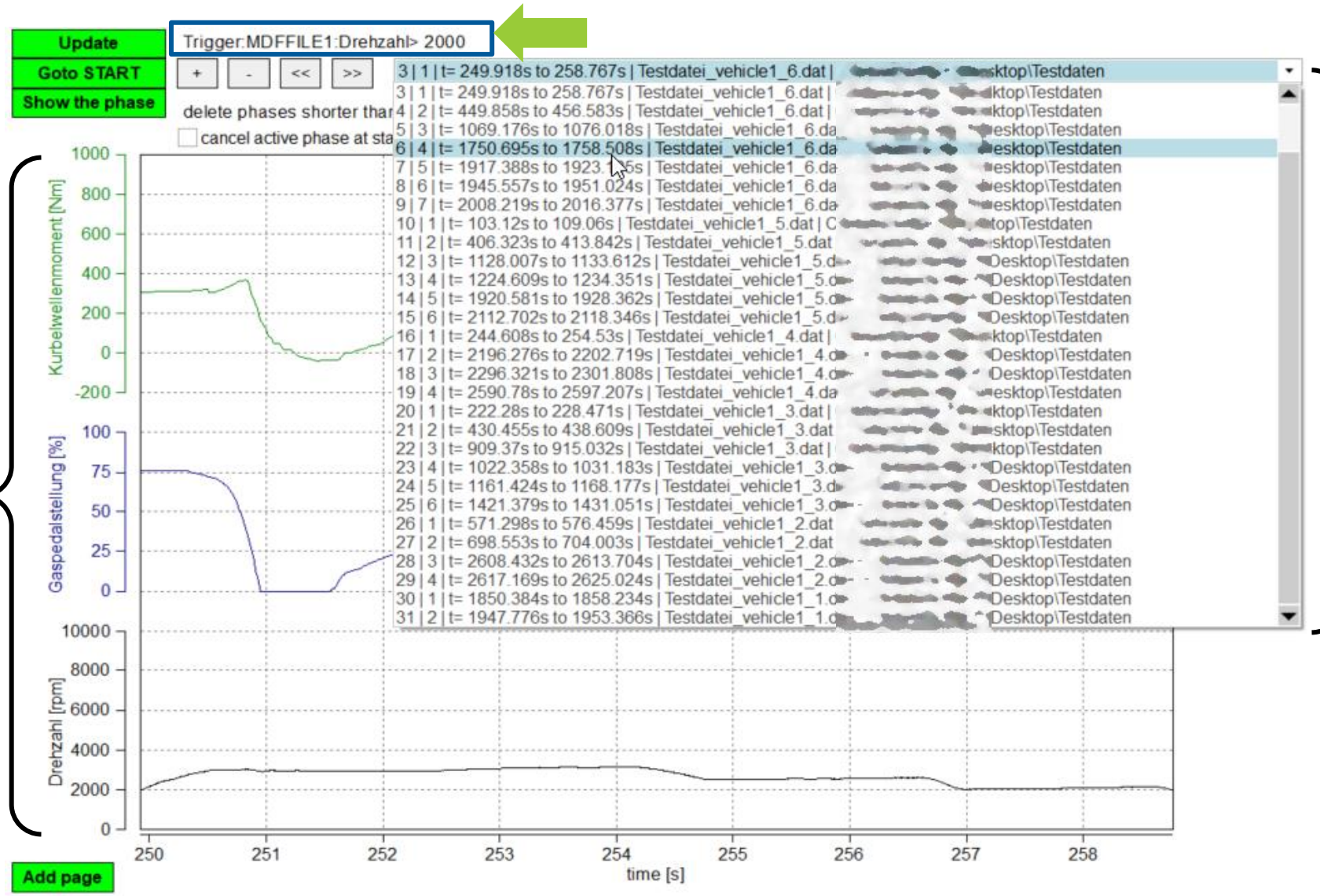
Start the evaluation of the job-list or manage a existing one.

All your defined jobs in the job-list

Define your input measurement files and paths as well as output path. Select and configure your evaluation.

Upgrade

Time sequences with trigger in AVL Concerto



Channels of interest

Choose your phases