



NEMO Version 2023-09-15

Release Letter



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1. Summary

As of September 15, 2023, proALPHA has released NEMO version 2023-09-15.

NEMO – standing for Natural Enterprise Management Optimizer – is a new breed of AaaS – Analyticsas-a-Service – offering from proALPHA. NEMO analyzes all sorts of event data. In particular NEMO analyzes business processes as performed with proALPHA ERP. The objective of NEMO is to enable better daily decisions by relating operational activities (input factors) with financial results (output factors).

NEMO version 2023-09-15 features various error corrections and performance improvements. Also, various housekeeping improvements have been implemented, i.e.:

- On demand activation of Master Data Management export
- Applying Scopes to complex reports
- Applying project settings to all NEMO apps

Following reports have been improved as well:

- (SAMPLE) Payment Dunning Analysis
- (SAMPLE) Stock Controlled Parts



2. Application Signature Features

Natural Performance Index (NPI)

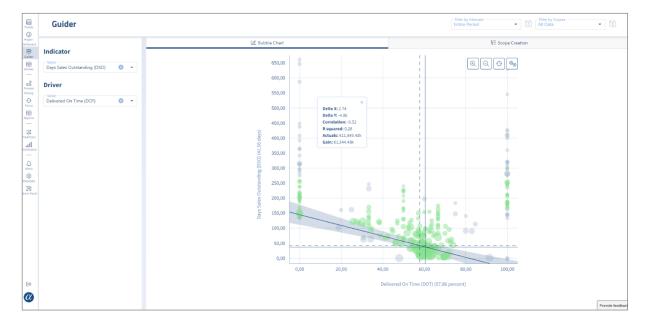
The NPI measures and ranks the fitness of a business. High NPIs indicate a significant improvement potential which is likely to be achieved. They help the user find and decide between the available optimization opportunities and are key to the daily decision support provided by NEMO.

Natural Leverage Index (NLI)

The NLI measures and ranks the degree of efficiency ("Wirkungsgrad") of a certain operational measure. High NLIs indicate a significant leverage which is likely to be achieved. They help the user find and decide between the available opportunities and as such facilitate the daily decision support provided by NEMO.

Unsupervised Learning

Since there is no optimum for business process optimization typical machine learning approaches don't apply. Hence NEMO leverages robust advanced statistics out of the so-called space of unsupervised learning algorithms.





Meta-data Driven

NEMO is not only data- but also metadata-driven. This means that virtually all metrics and scopes can be formed – either manually or automatically.

	Metadata								
) (per- hboard	Q Search	Days Inventory Outstanding (DIO)	Days Inventory Outstanding (DIO)						
uider	Alert Conditions	Conflict State							
Ranker	Define new Alert Condition								
ے	Attribute Groups	Display Name * Days Inventory Outstanding (DIO)	Display Name * Days Inventory Outstanding (DIO)						
Process Mining	Exported Columns	- Internal Name *							
nplexity	Defined Columns	djo							
Mining	Define new Column	Natural DIO is a measure of the Tied-up Cash in a co							
Focus	Derived Columns	number of days that the inventory would last if consu Value of inventory (as determined by the price per un	nit) divided by daily Consumption.	lt is					
Reports	* Metrics	called Natural DIO if, like in NEMO, it is calculated fro aggregated balance sheet data.	om the totality of all data rather the	in					
#	Annual Chum	Tag: #make							
ediction	Average Deviation Confirmation Dates	Unit Cotimization Orientation							
Distribution	Average Deviation Delivery Date	days							
ф lens	Average Deviation Purchasing Confirmation Date	Column definition and first aggregation							
ø	Average Number Purchasing Confirmations								
enitan X8	Average Purchasing Preparation Time	mvmt_object_i_d	8						
min Pane	Average Temperature	Column d_i_o_days	Aggregation maximum	•					
	Avg Price Bandwidth		Aggregation						
	Cash Paid	d_i_o_days_weighted	maximum	•					
	Cash Received	Column mvmt_average_costs_total_corp_cur	Aggregation						
	Credits Volume	· · · · · · · · · · · · · · · · · · ·		·					
	Days Inventory Outstanding (DIO)	Column part_i_d Aggregation maximum *							
c.,	Days Payables Outstanding (DPO)	Column							
[¢	Days Sales Outstanding (DSO)	+ Add aggregation for column							
α	Delivered On Time (DOT)	Second aggregatio	on						

Hyper-Dashboard

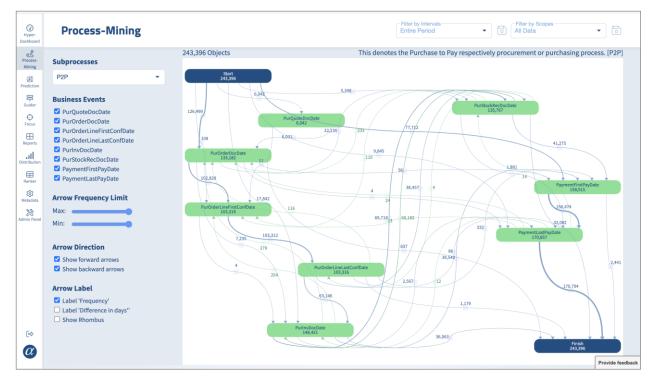
NEMO continuously ranks all business process correlations. This enables dynamic dashboards which are complementing classical dashboards.



Process Mining

Inherently NEMO discovers all executed business processes. Process Mining visualizes these as so-called process maps. The edges (lines, links) represent business process variants. They can be captured in scopes for further analysis (e.g. Focus and Guider). The nodes (vertices, points) represent the business events which, chained up, represent the executed business activities.

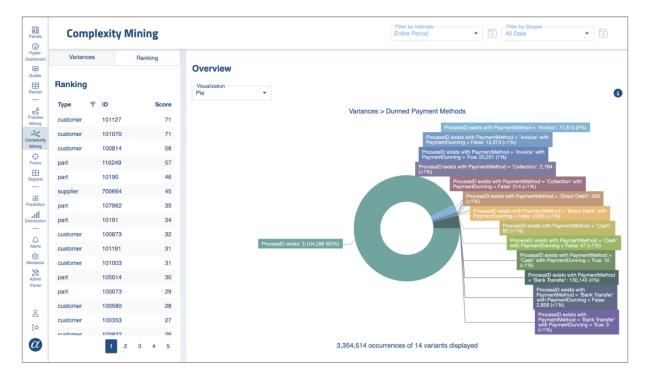




Complexity Mining

Similarly, NEMO detects automatically all executed business process variants. Each and every variant increases the complexity of the respective business.

Increasing complexity increases complexity costs. This phenomenon can be analyzed as well.

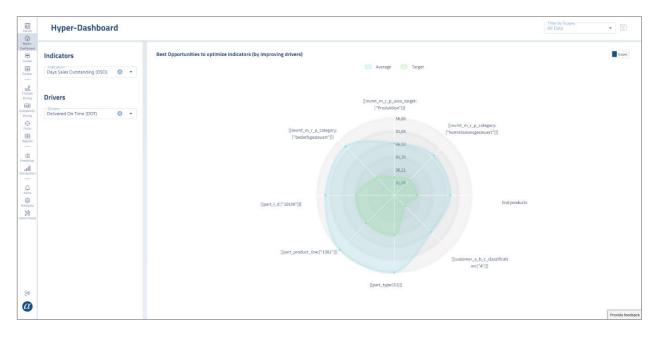




All Details

NEMO works always on details. There is no need to do any pre-aggregations at all. This means that the user can drill down to the detailed business documents at any point in time and instantaneously.

Here an example for the Payment Method Invoice. The Hyper-Dashboard provides an overview of the top measures for process improvements.



The Ranker table gives the details behind the Hyper-Dashboard.

Ranker										Filter by Scopes All Data	• 🛛
Indicators	NPI	NLI	Driver	Driver Value	Indicator	Indicator Value	R Squared	Correlation	Actuals	Gain	Scope
Indicators Days Sales Outstanding (DSO)	Q	Q	Q	Q	Q	a	Q	Q	Q	Q	Q
	1,228,230	150	Delivered On Tim	49.38%	Days Sales Outst	46.39 (days)	0.49	-0.70	€8,190.30k	€2,523.89k	[[mvmt_m_r_p_
Drivers	1,045,971	140	Delivered On Tim	47.95%	Days Sales Outst	48.06 (days)	0.46	-0.68	€7,476.48k	€2.252.74k	[[mvmt_m_r_p_
	 951,839 	133	Delivered On Tim	47.78%	Days Sales Outst	48.00 (days)	0.46	-0.68	€7,176.66k	€2.084.53k	End products
Delivered On Time (DOT) 😵 🔹	· 891,949	143	Delivered On Tim	57.14%	Days Sales Outst	46.28 (days)	0.43	-0.66	€6.245.62k	€2.053.92k	[[customer_a_b
	• 626.635	146	Delivered On Tim	49.19%	Days Sales Outst	56.78 (days)	0.53	-0.73	€4,280.45k	€1,174.27k	[[part_type:[61]
	626,153	146	Delivered On Tim	49.19%	Days Sales Outst	56.80 (days)	0.53	-0.73	€4,280.45k	€1,173.68k	[[part_product_
	> 561.369	165	Delivered On Tim	49.76%	Days Sales Outst	53.35 (days)	0.68	-0.82	€3,405.99k	€827.81k	[[part_i_d:["101
	554,675	167	Delivered On Tim	44.88%	Days Sales Outst	53.40 (days)	0.49	-0.70	€3.318.21k	€1.139.90k	[[mvmt_m_r_p]
	544,680	178	Delivered On Tim	49.32%	Days Sales Outst	58.99 (days)	0.39	-0.62	€3,057.86k	€1,410,07k	[[part_product]
	\$ 528,335	63	Delivered On Tim	53.52%	Days Sales Outst	46.12 (days)	0.30	-0.55	€8,361.60k	€1,748.98k	Storage Area 1
	503,446	148	Delivered On Tim	57.14%	Days Sales Outst	58.93 (days)	0.41	-0.64	€3,407.57k	€1,231.54k	[[supplier_indu
	+ 439.326	197	Delivered On Tim	39.77%	Days Sales Outst	72.99 (days)	0.42	-0.65	€2.227.58k	€1,043.02k	[[part_i_d:[*111
	\$ 389,940	130	Delivered On Tim	47.73%	Days Sales Outst	61.67 (days)	0.41	-0.64	€2,991.62k	€955.86k	[[part_product
	* 388.081	157	Delivered On Tim	38.06%	Days Sales Outst	66.90 (days)	0.32	-0.57	€2,478.03k	€1.214.12k	[[part_product_
	\$ 386,742	149	Delivered On Tim	45.28%	Days Sales Outst	51.06 (days)	0.46	-0.68	€2.587.24k	€841.74k	[[part_type:[5]]
	* 320,720	204	Delivered On Tim	36.56%	Days Sales Outst	74.43 (days)	0.52	-0.72	€1,575.23k	€614.98k	[[part_a_b_c_cl
	265,822	22	Delivered On Tim	57.74%	Days Sales Outst	46.25 (days)	0.13	-0.36	€11,849.21k	€2.030.06k	[[part_a_b_c_c]
	244.851	165	Delivered On Tim	37.20%	Days Sales Outst	65.49 (days)	0.32	-0.57	€1,485,17k	€755.03k	[[part_i_d:["111
	231,143	320	Delivered On Tim	52.03%	Days Sales Outst	50.89 (days)	0.58	-0.76	€722.04k	€398.64k	[[part_a_b_c_cla
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And the Focus view gives the details behind the Ranker table. And all within seconds.

Dynamic Dashboards

Panels Control of the second	Panels			All Data •
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Ranker Process Microg Complexity Microg Reports Higherts -	050 154.5 dys = 120% 0 0 11 12 1 2 3 4 5 6 7 8 9 10 Mom	00 4.8 days = 0.4% 00 -00 -10 1 12 1 2 3 4 5 4 7 8 9 10 Moth	000 2).7 dryp = 40% 0 0 0 0 1 1 2 2 2 4 5 6 7 8 9 10 Moth	000 13.5 days • 0.00 0 0 0 11 12 1 2 3 4 5 6 7 8 9 10 Moth
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ی ک				Provide National

From all details arbitrary dashboards can be derived as well.

Since these so-called Panels are automatically built-in conjunction with Scopes they are correct by nature.

Especially there is no dispute about the calculation of metrics and key figures anymore since those are isolated from the Panels.

Instantly Live

NEMO doesn't need any customization. Even chart-of-account or financial calendar are not needed for NEMO to function.

NEM

3. Technology Signature Features

The NEMO technology is characterized by

- Integration
 - All applications leverage and maintain the same data
- Speed
 - Response times should be as fast as possible
 - Development times customers or us should be as short as possible

These objectives are achieved by leveraging following unique approaches.

Push rather than Pull Data Copying

All data are regularly pushed from the source system to NEMO.

For our ERP we push all essential order types now:

- Purchase Order
- Production Order
- Sales Order

This means following supply chain processes are covered now:

- Source
 - Purchasing, Procurement
- Make
 - Inventory
 - Production
- Deliver
 - Sales
- Return Handling
 - Sales
 - Purchasing
- Finance
 - Accounting Journal

Flat Data Structure

There is only one table in NEMO.

There are no aggregations (cubes) nor indices.

There are no Joins at all.

Process Chains

All data are organized along the performed business processes.

NEM

Dynamic Calculations

All calculations are performed in real-time. There are no data preparation runs.

Metrics Driven

All control data (metadata) are available to all applications rather than being specific to a single application.

All control data are dynamically changeable – by the user or by us.

Metrics are maintained as separate entity rather than specific to each application.

In-memory Columnar Data Management

Our data are particularly suited to this mode of data management. The resulting compression rates (easily 1:10) are very beneficial to the overall performance.

Upside-down Visualization

Rows and columns are inverted compared to MS Excel. This makes patterns (e.g. populations of columns) easier to spot.

4. Compatibility

NEMO is compatible with all ERP releases from 6.1 onwards. NEMO is optimized for Chromium based web browsers e.g., Google Chrome or Microsoft Edge.

Functional Limitations

Following functionality is restricted as of now:

- Calculations of Driver and Indicators are not based on Intervals yet.
- Stock movements for material withdrawals are not yet exported in Production.
- Warehouse movements for material storage are not yet exported in Production.

Component Status

• N.A.

Known Issues

• Very large temporary scopes created with Process Mining might fail in other apps.



5. Documentation

Apart from this Release Letter, further documentation is available on NEMO Help Portal.

New and updated documents:

• NEMO User Guide (NEW)

6. Availability

All production environments have been updated already.

The new Master Data Management project is currently released with limited access. Reach out to us if you are interested in MDM.