



**TrendMiner**  
A SOFTWARE AG COMPANY

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# CHEAT SHEET

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TrendMiner N.V. | VAT BE 0894.414.630 | RPR Hasselt, Belgium  
IBAN: BE82 737022894568 | BIC: KREDBEBB | T +3211263830  
info@trendminer.com | www.trendminer.com

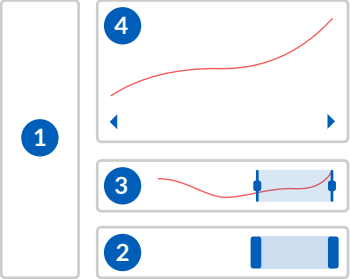


# WHAT? Descriptive Analytics

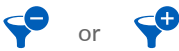
What process state is representative of my problem? Select interesting or abnormal patterns, relevant events, or certain time frames.

### TIME NAVIGATION


1. **Menu** – Access the TrendMiner functionalities.
2. **Double Slider** – Time range used for further analysis.
3. **Context Bar** – Overview of data selected by the Double Slider. Used for convenient selection of time periods in the Focus Chart.
4. **Focus Chart** – Detailed view of the selected time period. Allows for further time navigation, exporting and switching from the trend viewer to scatter plots. The view in the Focus Chart is also used in certain search functionalities.



### FILTERS




1. **Time Based Filter** – A static filter which is applied to certain time periods. Can be created manually or on top of search results. Time based filters are only applied once and show up as ad hoc filters.




2. **Criteria Based Filter** – A dynamic filter based on certain search criteria. Can be created after saving a search. Criteria filters are automatically applied to historical and new incoming data.


### TAG BUILDER



1. **Formula** – Create calculated tags using existing tags in the historian or further adapt on previously created calculated tags.




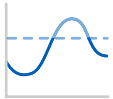
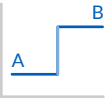

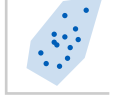
2. **Aggregation** – Create new tags based on certain operators to *smooth out* signals with noise or *highlight* certain parts of a trend.



3. **Data Import** – Import tags from a CSV-file in case certain information is not available in your historian data.

# WHEN? HOW OFTEN? Discovery Analytics

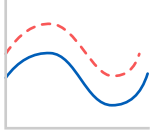
Did it happen before? When? Where? In what condition (context)? How many times? + Hypothesis Testing.

SIMILARITY	VALUE BASED	DIGITAL STEP	
<p><b>Time defined? Pattern?</b> Can my process be described by specific time behaviour?</p> 	<p><b>Criteria? Limits?</b> Am I looking for periods exceeding or defined by certain criteria?</p> 	<p><b>Switching?</b> Am I looking for switching/transitions?</p> 	
<p><b>CONTEXT</b></p> <p><b>Annotations?</b> Did I create comments before?</p> 	<p><b>AREA</b></p> <p><b>Operation Zone?</b> Under which conditions does my process operate?</p> 	<p><b>ACTIONS ON SEARCH RESULTS</b></p> <div style="display: grid; grid-template-columns: repeat(3, 1fr); gap: 5px;"> <div style="text-align: center;"> Sorting</div> <div style="text-align: center;"> Exporting</div> <div style="text-align: center;"> Context</div> <div style="text-align: center;"> Filters</div> <div style="text-align: center;"> Calculations</div> <div style="text-align: center;"> Layers</div> </div>	


## WHY? Diagnostic Analytics

Used to find Root Causes or generate hypotheses. Why did it happen? How did this situation compare with normal operation? What Influenced this situation?

### COMPARING TIME PERIODS





**Multiple Layers**  
n Good Periods vs. n Bad Periods





**Compare Table**

Tags	Layer 1	Layer 2	Layer 3
● —	—	— %	— %
● —	—	— %	— %



**Create Layers**

 → 

1. Manually

 → 

2. From results

 → 

3. From saved views

### INFLUENCE FACTORS & RECOMMENDATION ENGINE (RE)

**What influences my behaviour?**



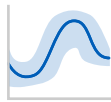
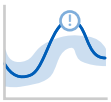
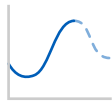
Influence factors analysis identifies the linear relationships between a tag of interest and one or more potential influence factors. The influencing factors can be combined in a linear model to approximate the tag of interest.

The RE gives tag suggestions for correlation and fingerprint deviations, based on a selected timeframe, tags and layers. The RE searches up to 1h in the past in all indexed tags for possible early indicators.

## WHAT'S NEXT? Real Time & Predictive Analytics























What is likely to happen next?

How is this situation going to evolve?

FINGERPRINTS 	MONITORING & ALERTS 	PREDICTIVE MODE 
 <p>What is the behaviour of my process?</p>	 <p>Alert me when a similar event or deviation is detected!</p>	 <p>How will my current batch/process evolve?</p>







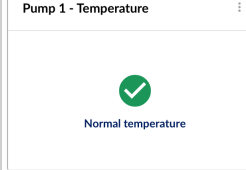






# KNOWLEDGE MANAGEMENT

Capture and document findings. Provide colleagues the latest information concerning your processes.

 <b>CONTEXT IN TRENDHUB</b>	 → 		 → 		 → 	
	<b>1. Manually</b> – after selecting a time period in the focus chart.		<b>2. On top of results</b> – after search.		<b>3. Automatic</b> – After activating a monitor.	
 <b>ACTIONS IN CONTEXTHUB</b>	Create items		Filter items		Search items	
	Add fields		Comment		Attach files	
 <b>CONTEXT VIEWS</b>	<b>Describe events</b>		<b>List your events</b>		<b>Gantt your events</b>	
	Contextualize process events		Create specialized lists		Display events in Gantt form	
	<b>Visualize your events</b>		<b>Share/export your findings</b>		<b>Live event updates</b>	
	Display event views in the focus chart		Share or export your event views with others	 	Get the latest information	

# DASHBOARD YOUR WORK

Keep a close eye on your processes by using intuitive dashboarding structures that provide you and your colleagues with pertinent information at a glance.

<b>CREATE DASHBOARD TILES</b>	 Reactor 601 tile using a TH view	 Maintenance request tile using CH view	 Alert status using your available views	 Display last known component value		
	Work Organizer 	Test platform 	Pump 1 - Temperature 	Throughput 		
<b>KEEP INFORMED</b>	<b>Tile descriptions</b>		<b>Click throughs</b>		<b>Auto-refresh updates</b>	
	Click on a tile to retrieve tile information		Click through your tile to open source information		Set your board to refresh periodically	
<b>COMMUNICATE YOUR FINDINGS</b>	 Export reports		 Share dashboards			