



# PLANORA

La décision industrielle éclairée



# Moteur d'optimisation

Recherche automatique du meilleur  
planning de production

Identification automatique du meilleur compromis  
performance / contraintes.

# PLANNING OPTIMISÉ

Résultat de l'algorithme d'optimisation



| ID | OF    | janvier 2026 |           |           |              |           |              |
|----|-------|--------------|-----------|-----------|--------------|-----------|--------------|
|    |       | 04           |           | 05        |              |           |              |
|    |       | dimanche, 25 | lundi, 26 | mardi, 27 | mercredi, 28 | jeudi, 29 | vendredi, 30 |
| 1  | OF 25 |              |           | ◆         |              |           |              |
| 2  | OF 1  |              |           | ◆         |              |           |              |
| 3  | OF 7  |              |           | ◆         |              |           |              |
| 4  | OF 13 |              |           | ◆         |              |           |              |
| 5  | OF 19 |              |           |           | ◆            |           |              |
| 6  | OF 14 |              |           |           | ◆            |           |              |
| 7  | OF 26 |              |           |           | ◆            |           |              |
| 8  | OF 20 |              |           |           | ◆            |           |              |
| 9  | OF 2  |              |           |           | ◆            |           |              |
| 10 | OF 8  |              |           |           | ◆            |           |              |
| 11 | OF 9  |              |           |           |              | ◆         |              |
| 12 | OF 27 |              |           |           |              | ◆         |              |
| 13 | OF 21 |              |           |           |              | ◆         |              |
| 14 | OF 15 |              |           |           |              | ◆         |              |
| 15 | OF 16 |              |           |           |              |           | ◆            |
| 16 | OF 28 |              |           |           |              |           | ◆            |
| 17 | OF 3  |              |           |           |              |           | ◆            |

Today

# PLAN DIRECTEUR DE PRODUCTION SIMULÉE

Résultat de l'algorithme de simulation



Chart Card Table **Gantt**

Conditional formatting  
 web URLs  
 Sort  
 Trellis  
 Filter  
 Formula  
**Data**

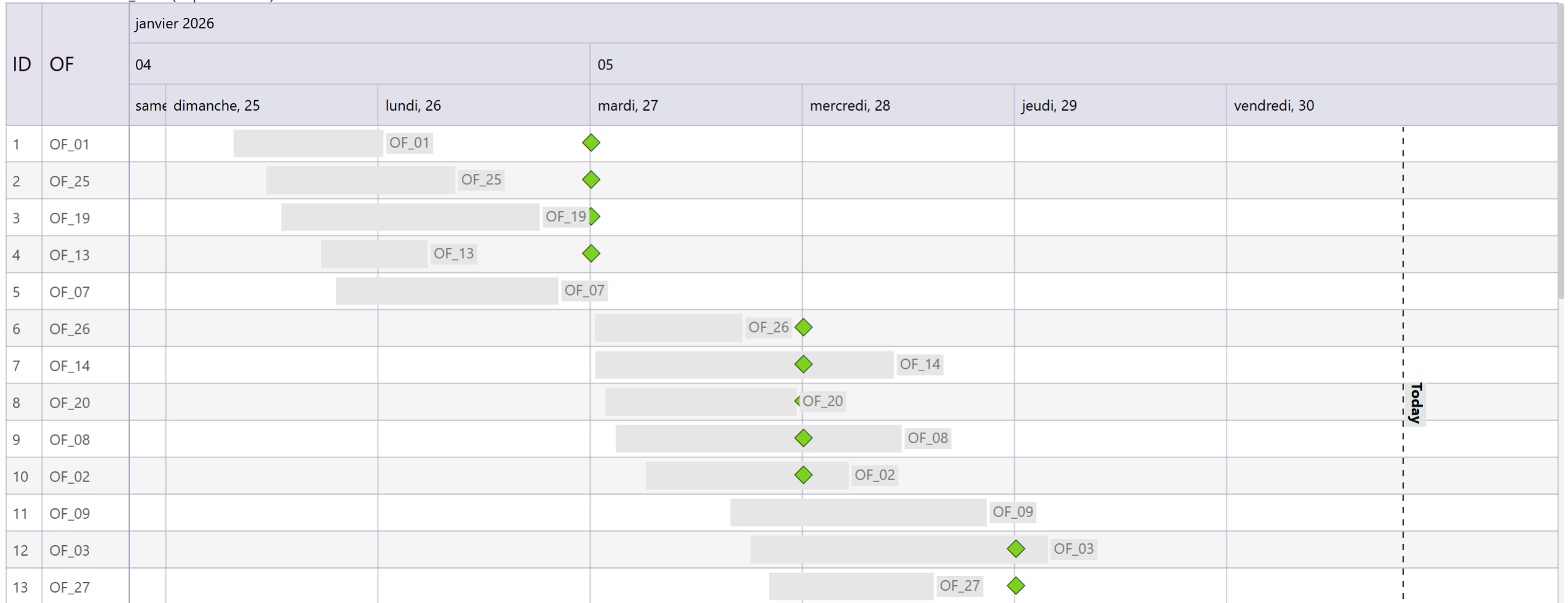
Data labels  
 Zoom  
 Levels  
**Display**

Milestone  
**Milestone**

Analytics  
 Days off  
**Story**

Pivot data  
 Filter  
 Storyboard  
 Off  
**Actions**

◆ Default ◆ due\_date (le plus récent)



# KPI



L'algorithme d'optimisation priorise le respect des délais clients et la durée globale du planning de production

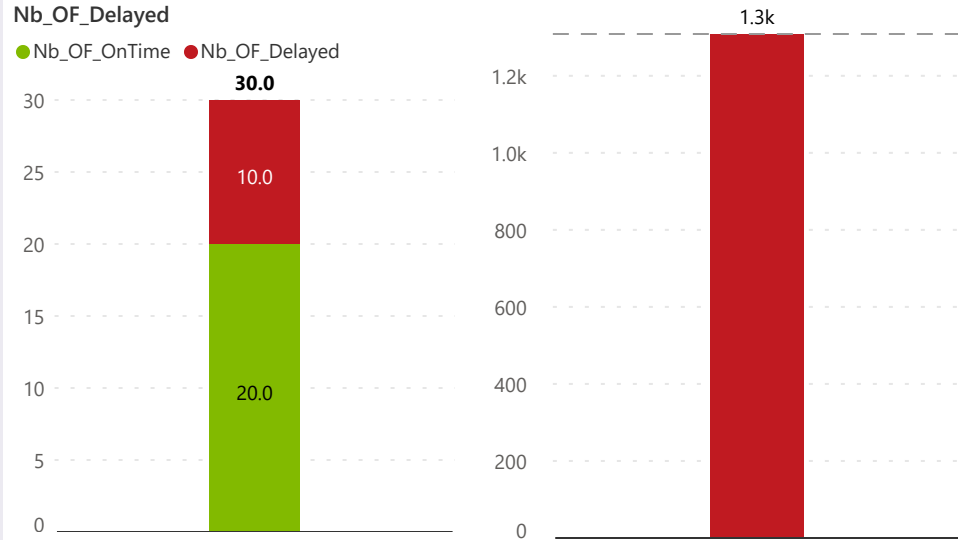
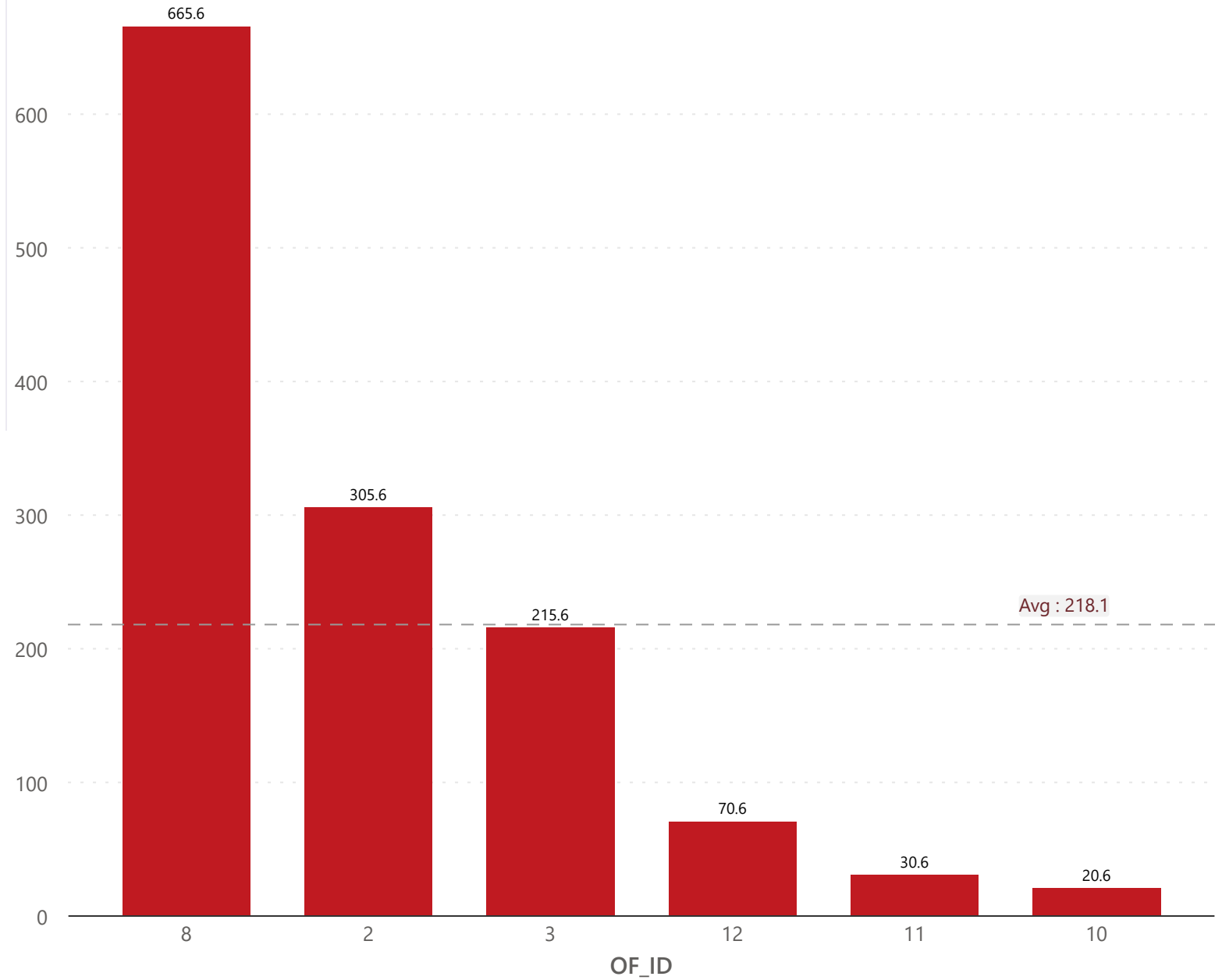
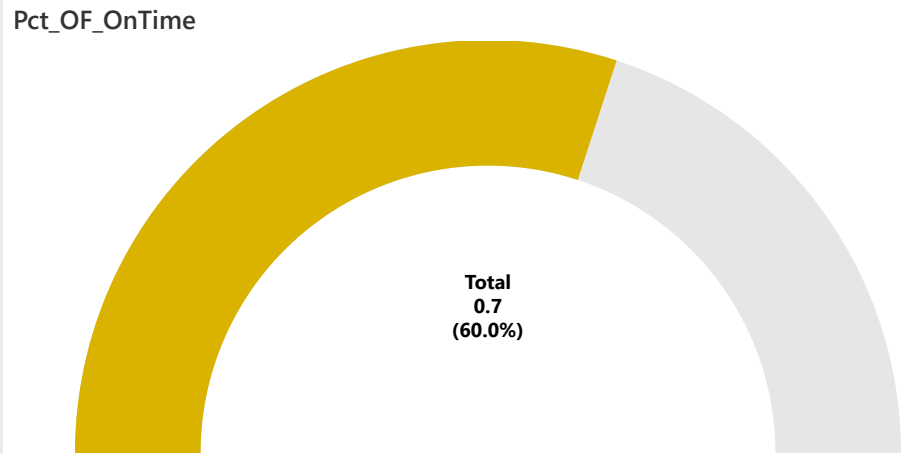


Chart Card >>

Visualization Trellis Measure Data Data labels Story Actions

Visualization Category Measure Data Display Story Actions

Storyboard Off



# ORDONNANCEMENT OPTIMISÉ PAR MACHINE

Planification prévisionnelle issue du jumeau numérique



Machine01

| ID | #OF   | janvier 2026 |              |           |           |              |           |             |
|----|-------|--------------|--------------|-----------|-----------|--------------|-----------|-------------|
|    |       | 04           |              |           | 05        |              |           |             |
|    |       | samedi, 26   | dimanche, 27 | lundi, 28 | mardi, 29 | mercredi, 30 | jeudi, 31 | vendredi, 1 |
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| 2  | OF_01 |              | OF_01        | ◆         |           |              |           |             |
| 3  | OF_07 |              | OF_07        | ◆         |           |              |           |             |
| 4  | OF_13 |              | OF_13        | ◆         |           |              |           |             |
| 5  | OF_19 |              | OF_19        |           |           |              |           |             |
| 6  | OF_14 |              |              | OF_14     | ◆         |              |           |             |
| 7  | OF_26 |              |              | OF_26     |           |              |           |             |
| 8  | OF_20 |              |              | OF_20     |           |              |           |             |
| 9  | OF_02 |              |              | OF_02     | ◆         |              |           |             |
| 10 | OF_08 |              |              | OF_08     | ◆         |              |           |             |
| 11 | OF_09 |              |              | OF_09     | ▶         |              |           |             |
| 12 | OF_27 |              |              | OF_27     | ▶         |              |           |             |
| 13 | OF_21 |              |              | OF_21     | ▶         |              |           |             |
| 14 | OF_15 |              |              | OF_15     |           |              |           |             |
| 15 | OF_16 |              |              | OF_16     |           | ◆            |           |             |
| 16 | OF_28 |              |              | OF_28     |           | ◆            |           |             |
| 17 | OF_03 |              |              | OF_03     | ◀         |              |           |             |

Machine02

| ID | #OF   | janvier 2026 |              |           |           |              |           |             |
|----|-------|--------------|--------------|-----------|-----------|--------------|-----------|-------------|
|    |       | 04           |              |           | 05        |              |           |             |
|    |       | samedi, 26   | dimanche, 27 | lundi, 28 | mardi, 29 | mercredi, 30 | jeudi, 31 | vendredi, 1 |
| 1  | OF_25 |              | OF_25        | ◆         |           |              |           |             |
| 2  | OF_01 |              | OF_01        | ◆         |           |              |           |             |
| 3  | OF_07 |              | OF_07        | ◆         |           |              |           |             |
| 4  | OF_13 |              | OF_13        | ◆         |           |              |           |             |
| 5  | OF_19 |              | OF_19        |           |           |              |           |             |
| 6  | OF_14 |              |              | OF_14     | ◆         |              |           |             |
| 7  | OF_26 |              |              | OF_26     |           |              |           |             |
| 8  | OF_20 |              |              | OF_20     |           |              |           |             |
| 9  | OF_02 |              |              | OF_02     | ◆         |              |           |             |
| 10 | OF_08 |              |              | OF_08     | ◆         |              |           |             |
| 11 | OF_09 |              |              | OF_09     | ▶         |              |           |             |
| 12 | OF_27 |              |              | OF_27     | ▶         |              |           |             |
| 13 | OF_21 |              |              | OF_21     | ▶         |              |           |             |
| 14 | OF_15 |              |              | OF_15     |           |              |           |             |
| 15 | OF_16 |              |              | OF_16     |           | ◆            |           |             |
| 16 | OF_28 |              |              | OF_28     |           | ◆            |           |             |
| 17 | OF_03 |              |              | OF_03     | ◀         |              |           |             |

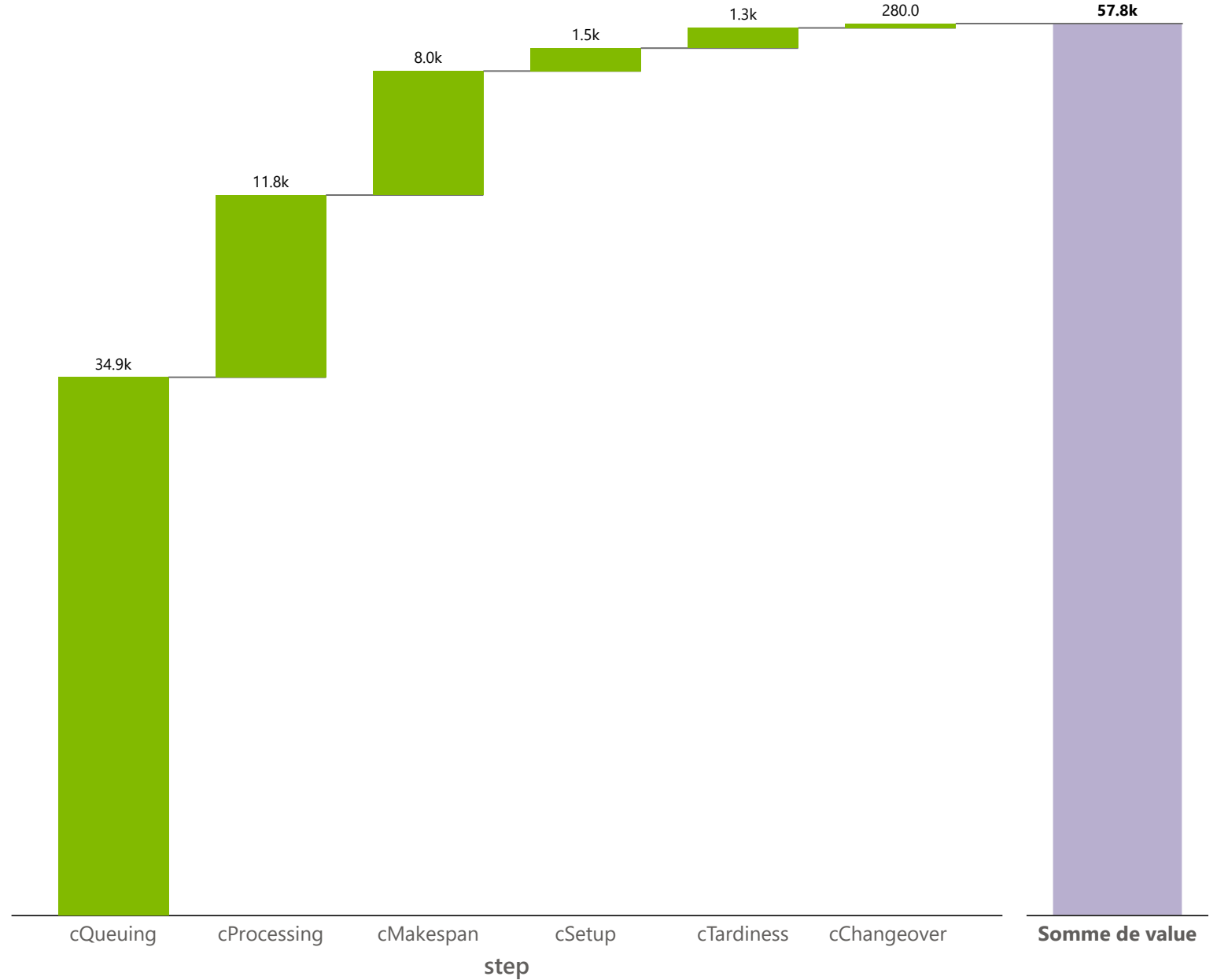
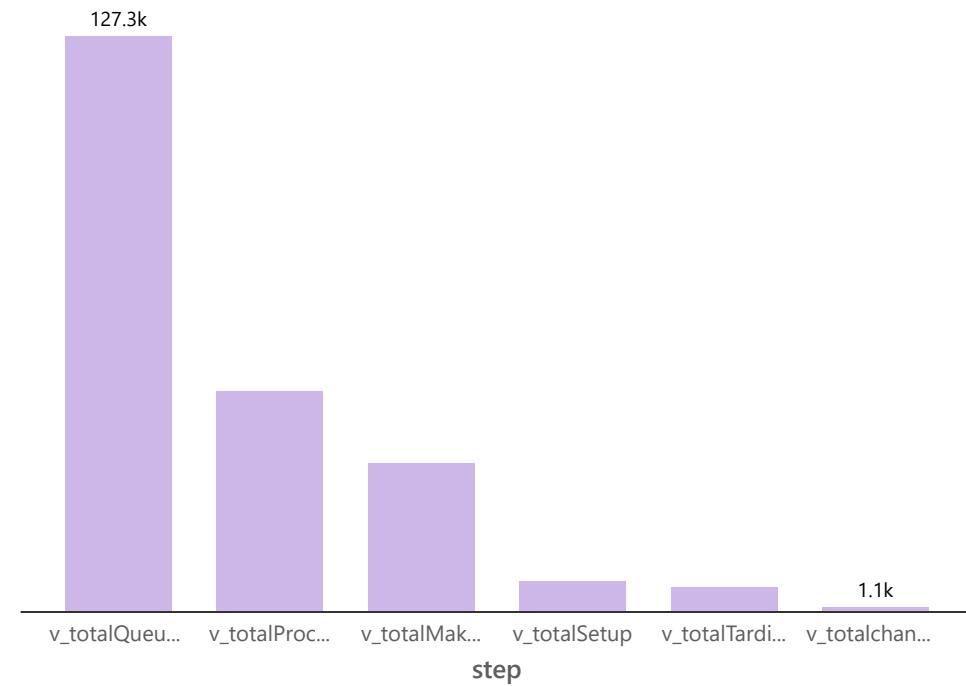
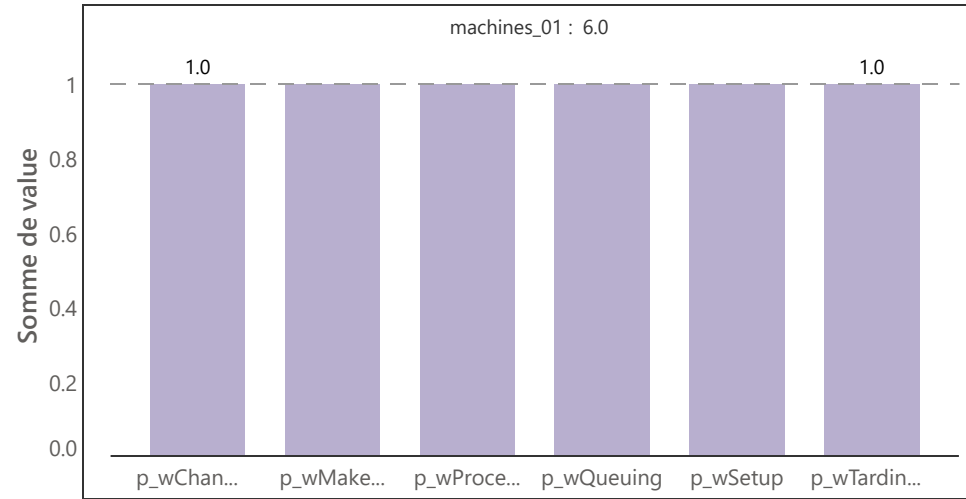


# LEVIERS DE PERFORMANCE DU PLANNING OPTIMISÉ

L'algorithme d'optimisation priorise le respect des délais clients et la durée globale du planning de production



Somme de value by step





# Moteur Multi scénarios

Comparaison de scénarios pour éclairer  
la décision

# SCORE DE PERFORMANCE PAR SCENARIO

Fitness en minutes cumulées



Chart Card Table Gantt

Pivot data

Analytics Deviation Annotation

Visualization Category Measure Data Display Story Actions

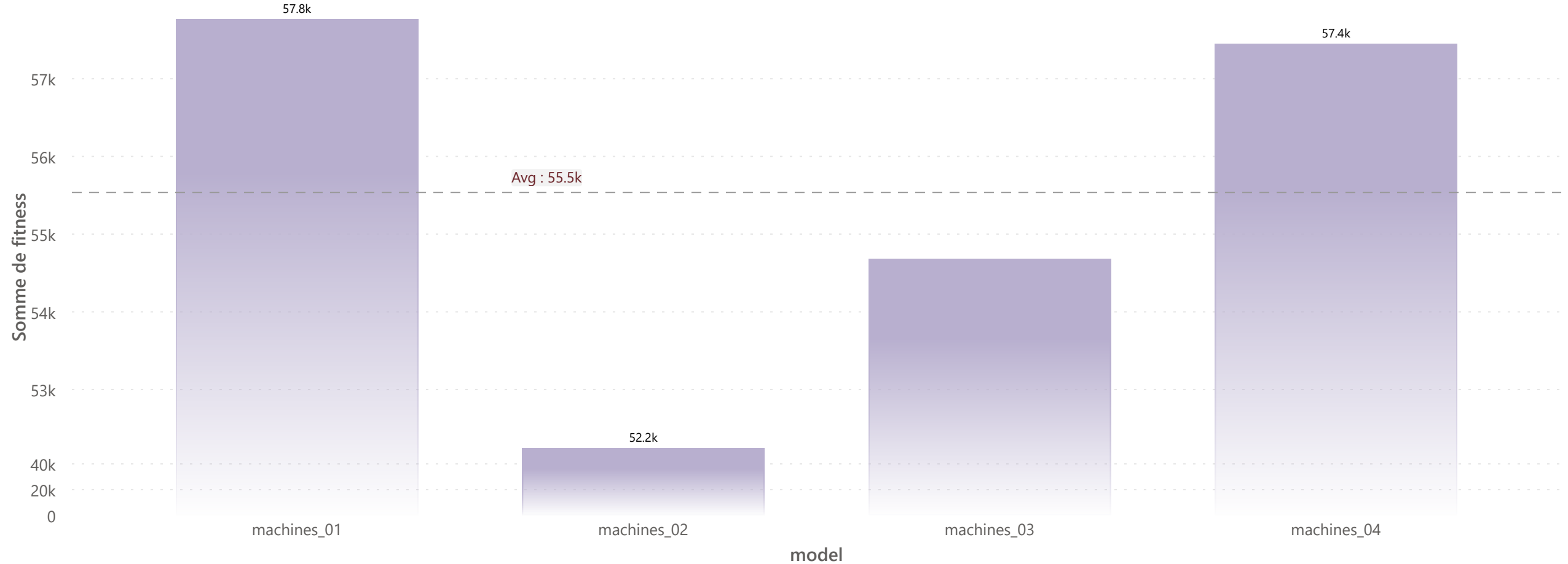
Chart Type Rotate Trellis Series Split Conditional formatting Sort Top n Filter Aggregation Formula Data labels

KPI

Off

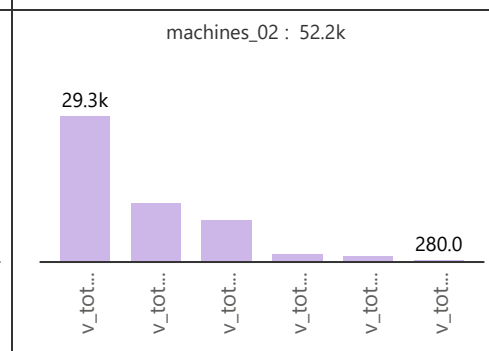
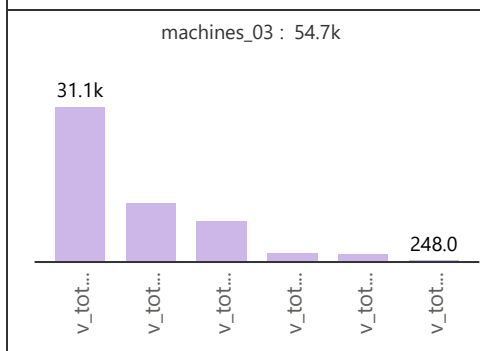
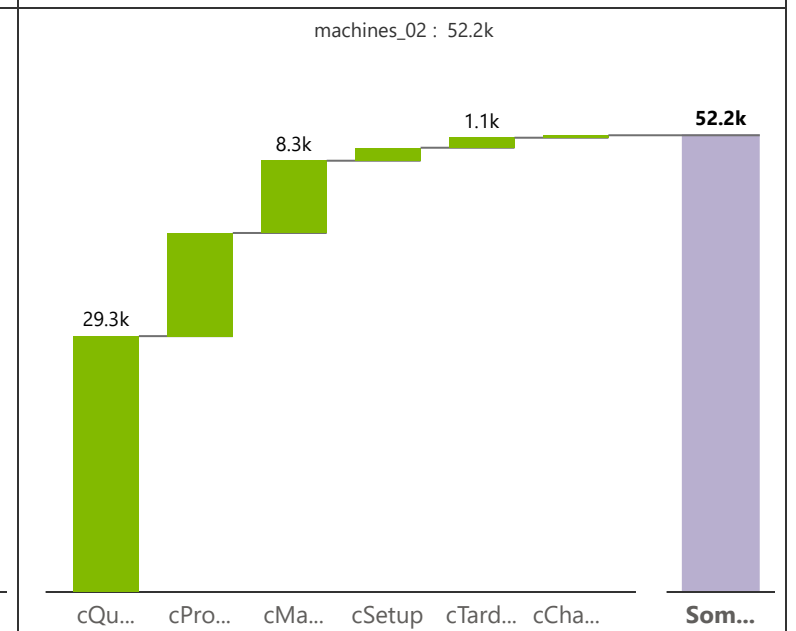
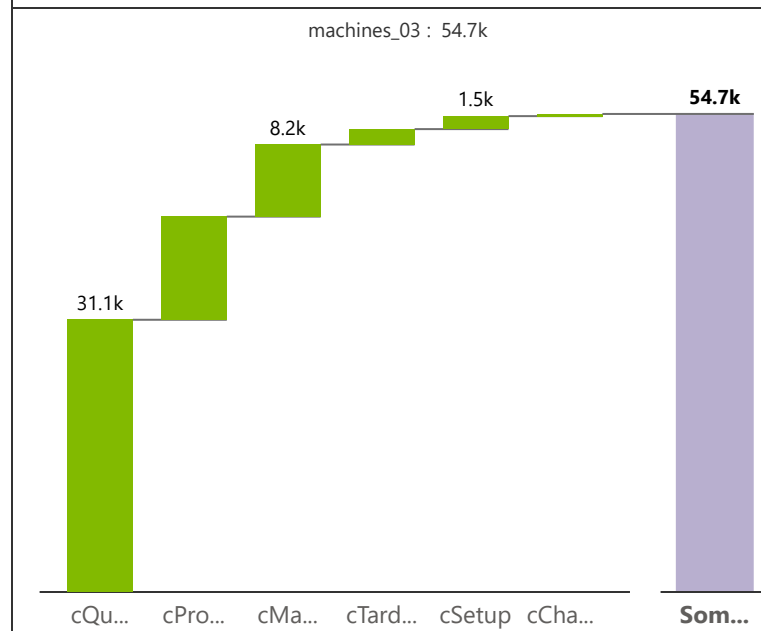
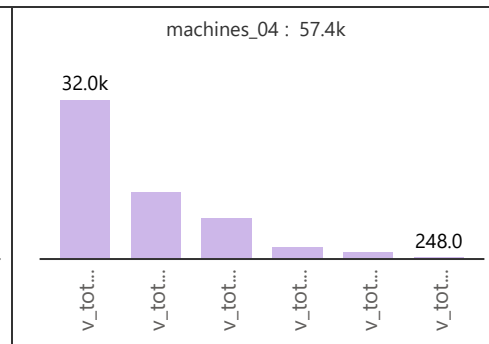
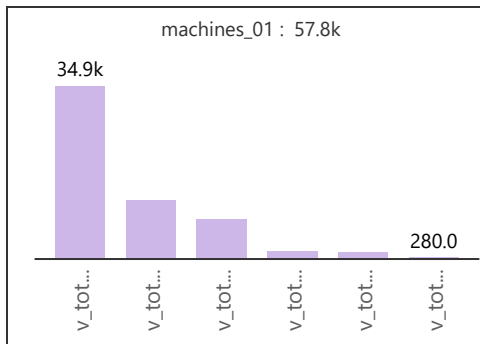
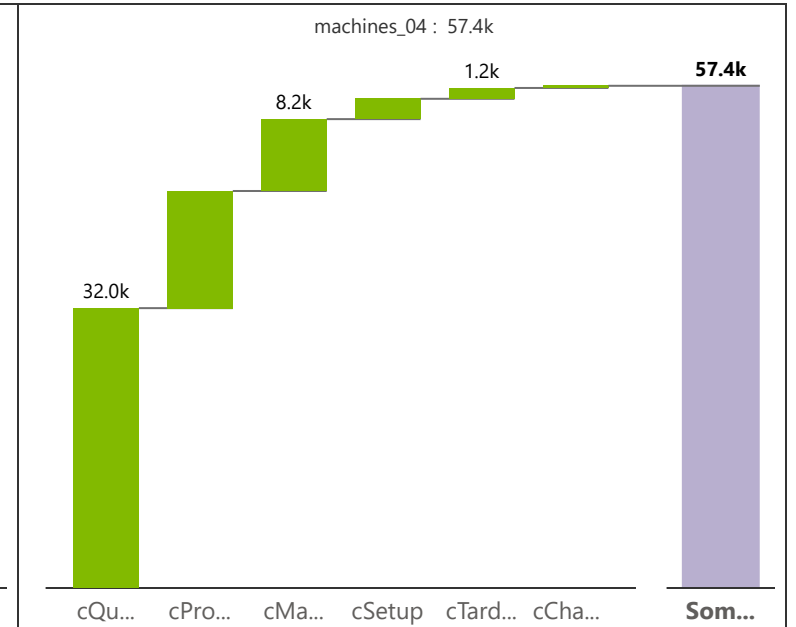
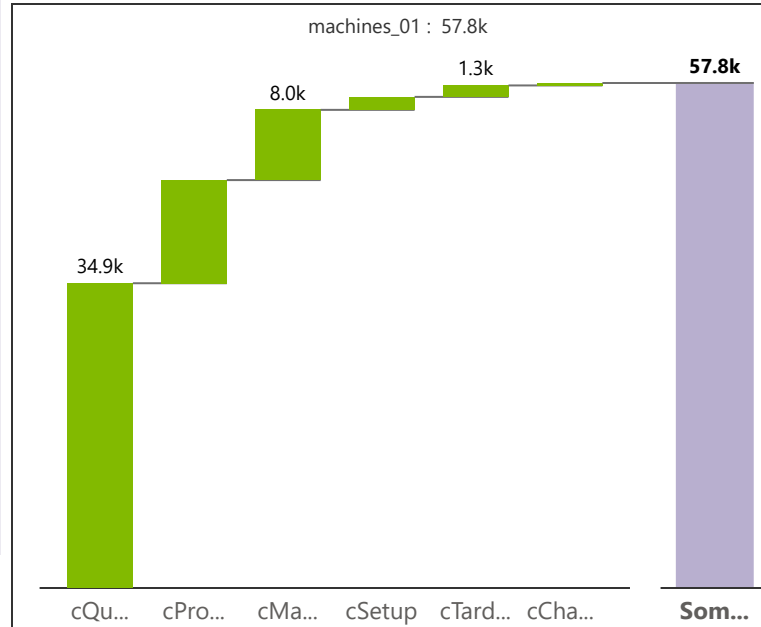
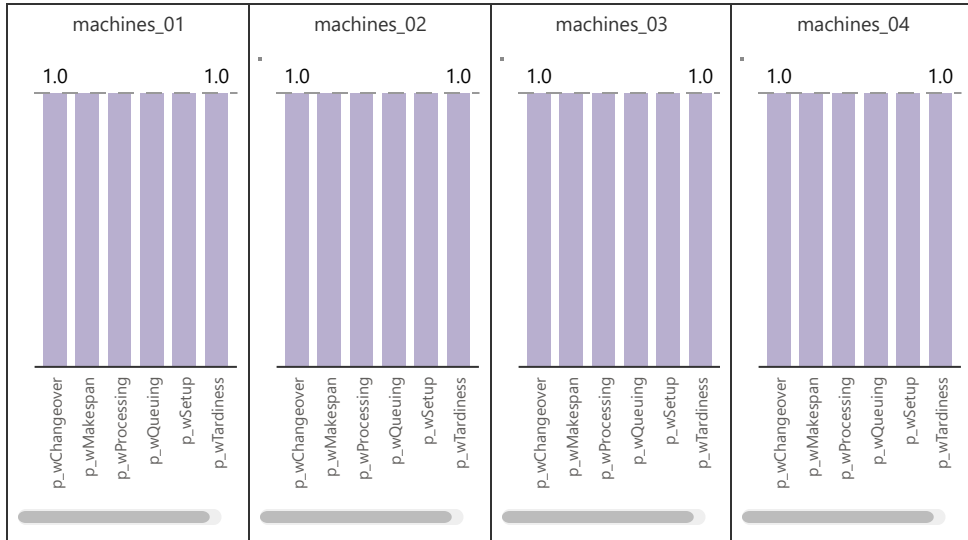
## Somme de fitness by model

● Somme de fitness



# LEVIERS DE PERFORMANCE DU PLANNING OPTIMISÉ

L'algorithme d'optimisation priorise le respect des délais clients et la durée globale du planning de production



# OÙ PASSE LE TEMPS PRODUCTION ?

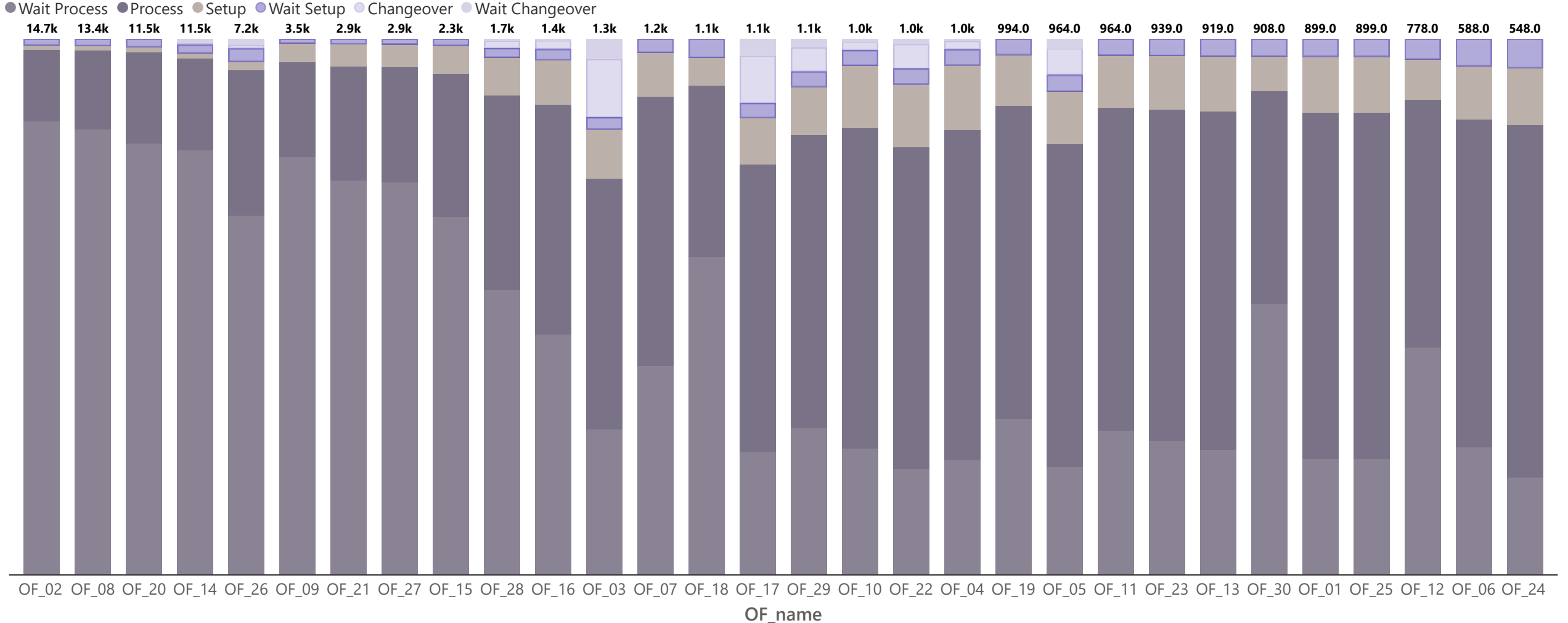
Part des temps de file, réglage, changement de série et process par OF (100% = durée totale OF)



Chart Card Table Gantt
Pivot data Analytics Storyboard Off

Chart Type Rotate Trellis Series Split Conditional formatting Sort Top n Filter Aggregation Formula Data labels Analytics Deviation Annotation KPI Search Settings PDF

Visualization Category Measure Data Display Story Actions

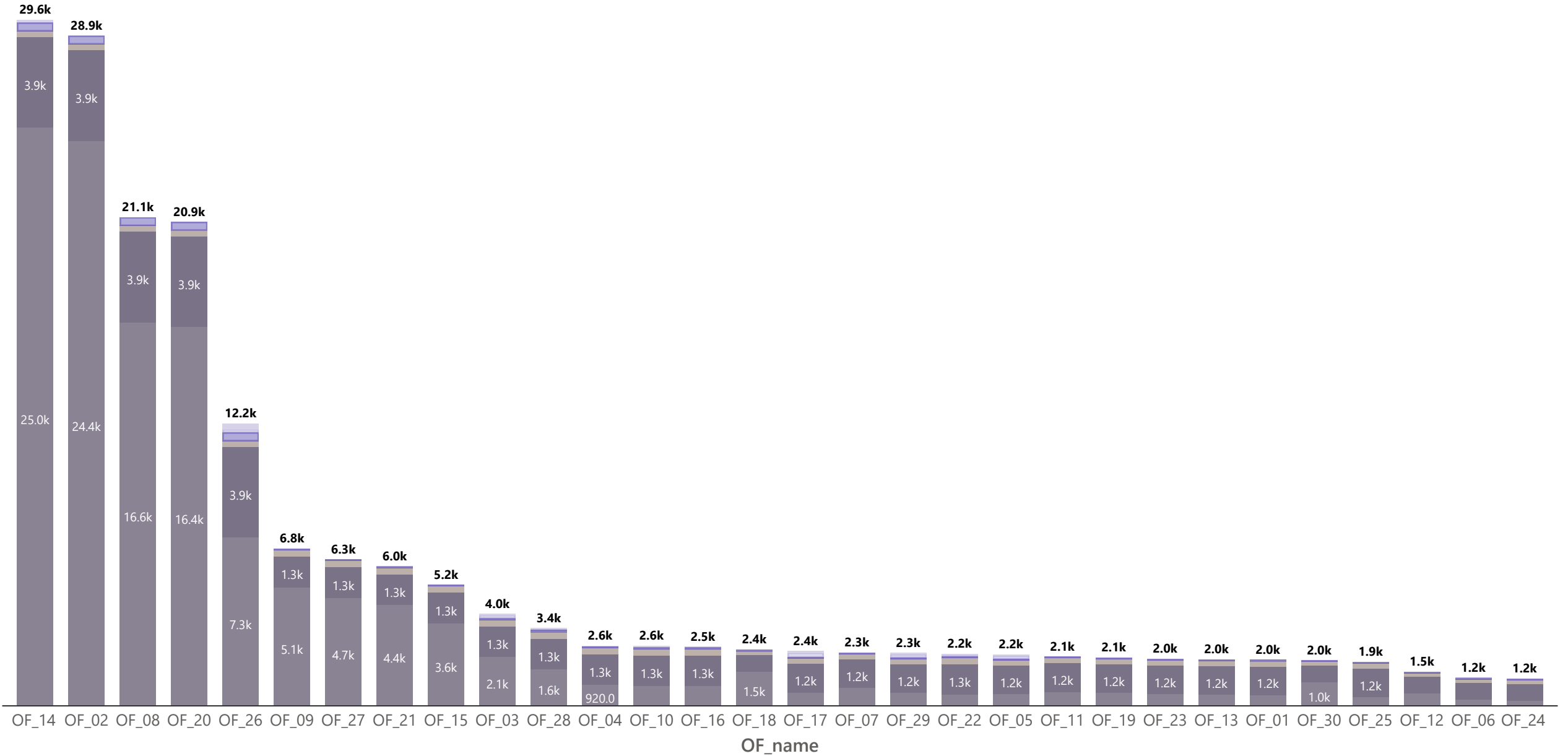


# OÙ PASSE LE TEMPS PRODUCTION ?

File d'attente, temps process, réglages et changements de série (en minutes)



● Wait Process ● Process ● Setup ● Wait Setup ● Changeover ● Wait Changeover



# BREAKDOWNS

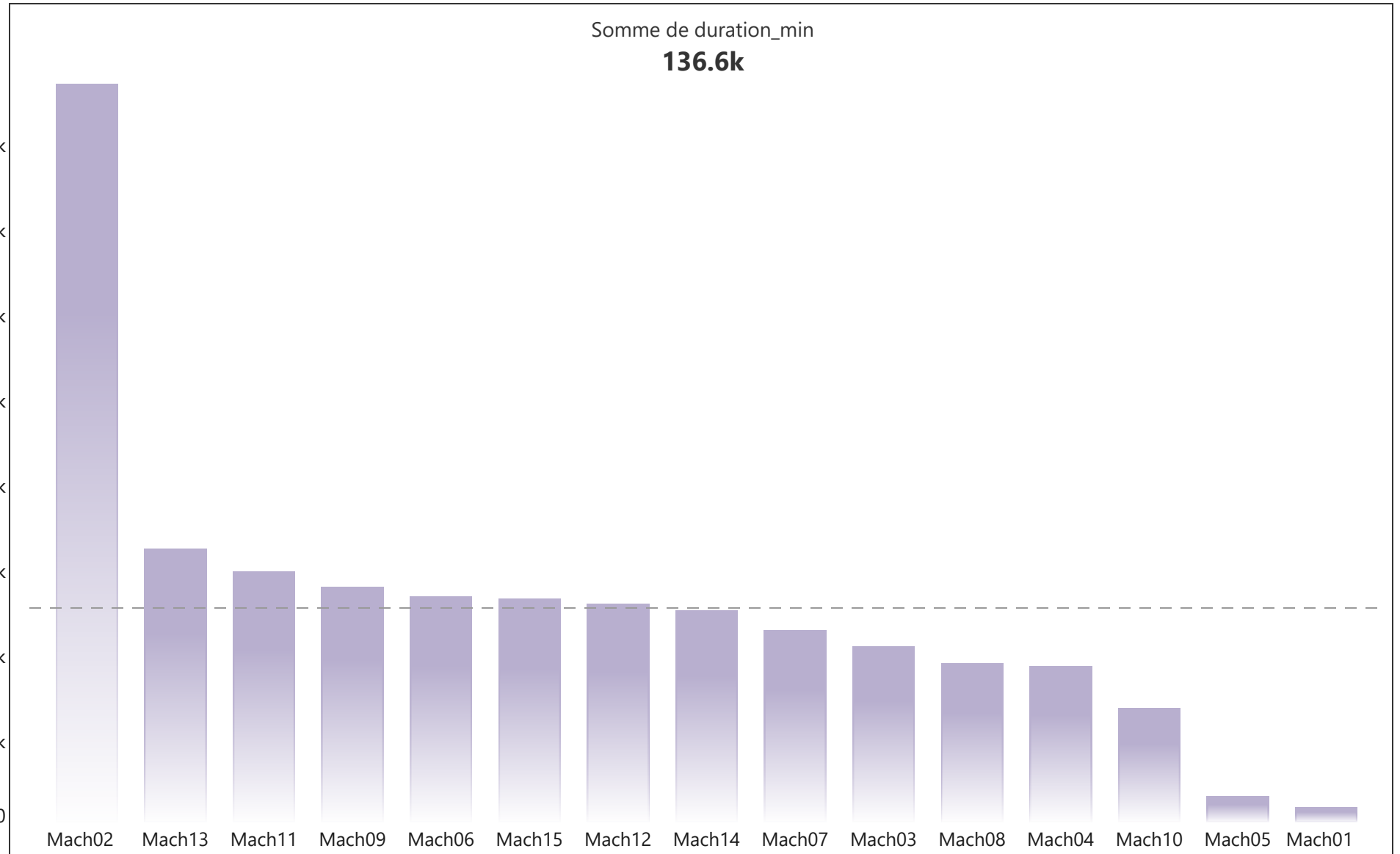
Theoretical slots



| machine   | source    | Somme de duration_n |
|-----------|-----------|---------------------|
| Machine02 | MTBF_REAL | 21 420              |
| Machine13 | MTBF_REAL | 10 500              |
| Machine11 | MTBF_REAL | 9 960               |
| Machine09 | MTBF_REAL | 9 600               |
| Machine06 | MTBF_REAL | 9 375               |
| Machine15 | MTBF_REAL | 9 315               |
| Machine12 | MTBF_REAL | 9 200               |
| Machine14 | MTBF_REAL | 9 045               |
| Machine07 | MTBF_REAL | 8 580               |
| Machine03 | MTBF_REAL | 8 190               |
| Machine08 | MTBF_REAL | 7 800               |
| Machine04 | MTBF_REAL | 7 725               |
| Machine10 | MTBF_REAL | 6 750               |
| Machine05 | MTBF_REAL | 4 680               |
| Machine01 | MTBF_REAL | 4 425               |

**Total** **136 565**

Somme de duration\_min by machine





**RDV  
VISIOCONFERENCE**

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sur SITE**

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