

# Nova Schedule Pilot

Nova — End-to-End Schedule Report

Timefold Field Service Routing · Post-Patch Metrics

Report Date: 15 February 2026

Schedule Period: 4 weeks · Solver: Timefold FSR

Data: Nova recurring visits — real production data (post from-patch)

PILOT v1.0

# Executive Summary

End-to-end pilot of automated care visit scheduling for **Nova** (real production data) using **Timefold Field Service Routing**. The schedule covers a **4-week** planning window with 24 input vehicles (21 active after patch) and 2,921 visit occurrences. After from-patch processing, all 249 empty shifts were removed — **idle time drops to zero**, boosting staffing efficiency from 60.1% to **92.7%** and margin from 57.7% to **62.9%**.



## Pilot Context

<b>Data Source</b>	Nova (real production data, with geocoding)
<b>Planning Window</b>	4 weeks
<b>Solver</b>	Timefold Field Service Routing (cloud API)
<b>Post-Processing</b>	From-patch: pin visits, end shifts at depot, remove empty shifts
<b>Staff</b>	24 vehicles input, 21 active after patch across 207 shifts
<b>Visits</b>	2,819 care visits (2,717 solo + 102 double-employee = 2,921 Timefold visits)

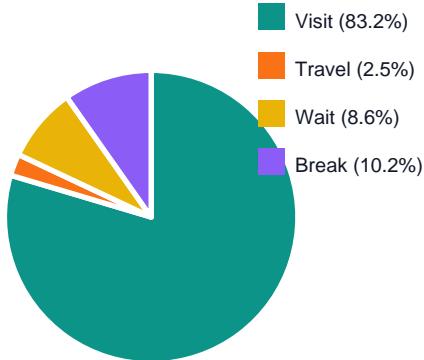
# Shift Composition & Time Breakdown

After from-patch, shifts contain **zero idle time** — only four categories remain: visit, travel, wait, and break. **83.2%** of total shift time is spent on actual care delivery. Travel is remarkably low at just **2.5%**, reflecting Nova's compact visit geography.

Shift Time Composition — Post-Patch (% of total)



Time Distribution (Post-Patch)



Category	Time	% of Shift	Cost (SEK)
<b>Shift total</b>	1,338h 26min	100%	227,533
Visit (care)	1,113h 45min	83.21%	189,338
Travel	33h 32min	2.51%	5,700
Wait	115h 12min	8.61%	19,584
Break	136h 30min	10.20%	23,205

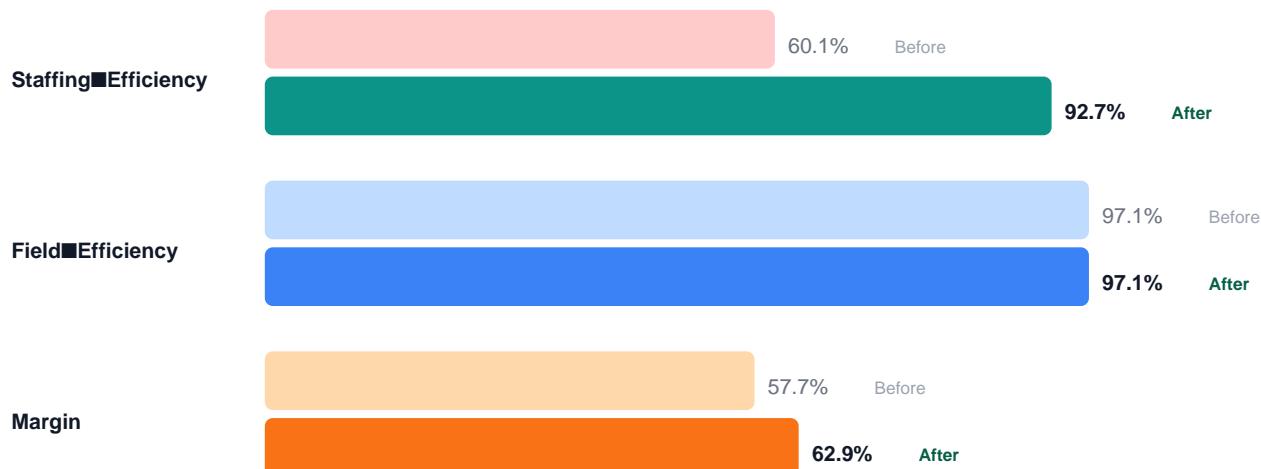
## Efficiency Metrics

Metric	Formula	Result	Benchmark
Staffing	visit / (shift - break)	<b>92.66%</b>	—
Field	visit / (visit + travel)	<b>97.08%</b>	> 67.5% (Slingor) ✓
Wait	visit / (visit + travel + wait)	<b>88.22%</b>	—
Idle	visit / (visit + travel + idle)	<b>97.08%</b>	idle = 0h after patch

# Impact of From-Patch Processing

The from-patch step pins assigned visits, ends shifts at the depot, and removes all empty shifts. This eliminates **249 empty shifts** (55% of all shifts) and **removes 100% of idle time** (591h → 0h). Staffing efficiency jumps from 60.1% to **92.7%** — a +32.6 pp improvement.

**Before vs After From-Patch**

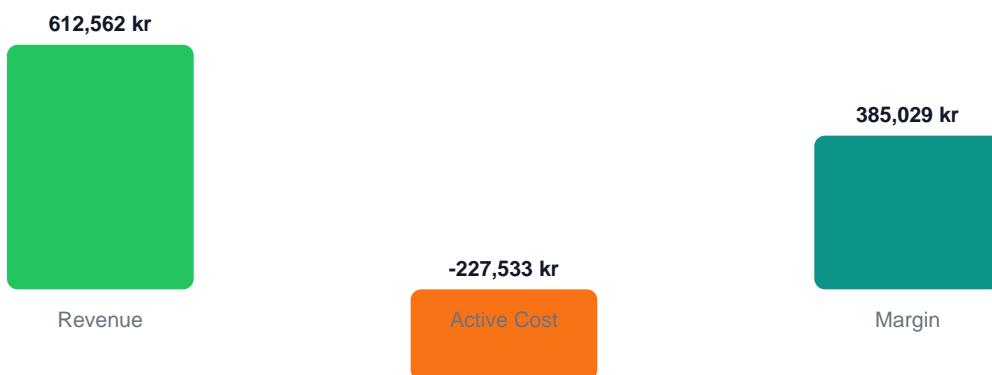


Metric	Before Patch	After Patch	Change
Shifts	456 (249 empty)	<b>207 (0 empty)</b>	<b>-249 shifts</b>
Vehicles	24 (3 empty)	<b>21 (0 empty)</b>	<b>-3 vehicles</b>
Staffing Efficiency	60.1%	<b>92.7%</b>	<b>+32.6 pp</b>
Field Efficiency	97.1%	<b>97.1%</b>	—
Idle Time	591h 12min	<b>0h 0min</b>	<b>-100%</b>
Break Time	261h 0min	<b>136h 30min</b>	<b>-47.7%</b>
Total Shift Time	2,114h 41min	<b>1,338h 26min</b>	<b>-36.7%</b>
Margin	57.7%	<b>62.9%</b>	<b>+5.2 pp</b>

# Revenue & Cost Analysis

Financial analysis based on 550 kr/h revenue rate and 170 kr/h cost rate. Post-patch schedule has zero inactive time, so all shift time is productive.

**Revenue → Cost → Margin (SEK)**



## Cost Breakdown

Item	Amount (SEK)	Notes
Revenue (visit x 550 kr/h)	612,562	1,113h 45min of care delivery
Active Cost (shift x 170 kr/h)	227,533	1,338h 26min (= all shift time, 0 idle)
— Visit cost	189,338	83.2% of cost
— Travel cost	5,700	2.5% of cost
— Wait cost	19,584	8.6% of cost
— Break cost	23,205	10.2% of cost
<b>Margin</b>	<b>385,029 (62.9%)</b>	<b>Revenue minus cost</b>
Non-Visit Waste	48,489	21.3% of cost

# Key Insights & Recommendations

## 1. Perfect Assignment — 100%

All 2,921 visits were successfully assigned to staff with zero unassigned visits. This is a perfect score on real production data, validating Timefold's capability for Nova's care scheduling.

## 2. Zero Idle Time After Patch

From-patch completely eliminates idle time (591h → 0h). Every minute of shift time is now accounted for as visit, travel, wait, or break. This is the cleanest possible schedule output.

## 3. Staffing Efficiency Jumps to 92.7%

With idle removed and empty shifts eliminated, 92.7% of paid working time (excluding breaks) is spent on care delivery. This is a +32.6 pp improvement from the pre-patch 60.1% and demonstrates excellent schedule density.

## 4. Exceptional Field Efficiency: 97.1%

Field efficiency of 97.1% is outstanding — staff spend 97 out of every 100 field minutes on care delivery. Travel is just 2.5% of shift time (33h 32min over 4 weeks), reflecting Nova's compact visit geography.

## 5. Wait Time is the Key Optimization Target

At 8.6% of shift time (115h 12min), wait time is now the largest non-productive category. With idle eliminated, reducing wait time is the next lever for improving staffing efficiency beyond 92.7%.

## Recommendations

- 1. Integration:** Import the final schedule (from-patch/output\_595776f0.json) into the Caire platform for operational deployment.
- 2. Wait Time Reduction:** At 115h 12min (8.6%), wait time is the primary remaining optimization target. Investigate tighter time windows and visit clustering.
- 3. Profile Optimization:** Compare Timefold solver profiles to reduce wait time while maintaining 100% assignment and zero idle.
- 4. Scale Comparison:** Compare Nova results with Huddinge pilot to identify district-specific patterns and generalize optimization strategies.