

# Attendo Schedule Pilot

Huddinge Hemtjänst — Recurring Visits

Powered by  caire and  EirTech

bjorn@caire.se · caire.se · eirtech.ai

2-Week Window · 3,622 Visits · 39 Slingas · 81 Clients · All metrics on 2-week basis · Feb 2026

## Manual vs Caire — Key Results

Eff. (incl idle)	Eff. (excl idle)	Travel	Margin
60.6% <b>85.4%</b> Manual      Caire	67.8% <b>85.7%</b> Manual      Caire	24.0% <b>9.8%</b> Manual      Caire	31.0% <b>51.0%</b> Manual      Caire
+24.8pp	+17.9pp	-14.2pp	+20.0pp

# Manual vs Caire — Dashboard

Side-by-side comparison of current manual scheduling (slingor) vs Caire-optimized scheduling

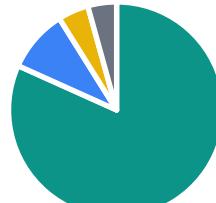
Efficiency (incl idle)	Efficiency (excl idle)	Travel Ratio	Idle Time	Profit Margin					
60.6% Manual +24.8pp Caire	85.4% Caire	67.8% Manual +17.9pp Caire	85.7% Caire	24.0% Manual -14.2pp Caire	9.8% Caire	12.9% Manual -12.9pp Caire	0.0% Caire	31.0% Manual +20.0pp Caire	51.0% Caire

## Time Composition

Manual (Slinga)



Caire (Optimized)



Metric	Manual	Caire	Δ
Eff. (incl idle)	60.6%	85.4%	+24.8pp
Eff. (excl idle)	67.8%	85.7%	+17.9pp
Travel	24.0%	9.8%	-14.2pp
Idle	12.9%	0.0%	-12.9pp
Margin	31.0%	51.0%	+20.0pp



## Time Breakdown (hours)



■ Manual (2 weeks × 340 shifts) ■ Caire (2 weeks × 271 shifts) Both periods cover 2 weeks. Manual = weekly recurring plan ×2, Caire = optimized window. All metrics directly comparable.

**Efficiency definitions:** **Incl. idle** = visit / total shift (all paid time in denominator, the full picture). **Excl. idle** = visit / (visit + travel + break) (idle/gap time removed — Attendoo's reported 67.5% benchmark uses this formula). **Assumptions:** Cost 230 kr/h (field staff), Revenue 550 kr/h (visits). No overhead (cars, admin). Pure field routing ROI.

**Note on Caire "Wait" time (84h / 4.8%):** The algorithm respects visit time-window constraints, so theoretical wait appears when an employee arrives before the next allowed start. In practice, this wait will be absorbed: visits can start when the employee arrives (early), or the buffer is consumed by unforeseen events — traffic, finding parking, earlier visits running longer. The actual impact will be measurable when comparing scheduled vs real-world data.

## Key Improvements

**-12.9pp**

Idle → Zero

Manual 12.9% idle (322h). Caire: 0%. Solver compressed all shift windows.

**+24.8pp**

Staffing Efficiency

Increased from 60.6% to 85.4%. More visit time per paid hour.

**+166,617 kr**

Margin Uplift

From 31.0% to 51.0% — 726 fewer shift hours.

## Shift Composition — Detail

Drill-down into how shift hours are allocated

### Manual Schedule — Time Allocation



### Caire Schedule — Time Allocation



### Detailed Time Breakdown

Category	Manual (h)	Manual %	Caire (h)	Caire %	Δ
Total Shift	2502	100%	1776	100%	—
Visit Time	1517	60.6%	1516	85.4%	+24.8pp
Travel Time	600	24.0%	174	9.8%	-14.2pp
Wait Time	—	—	84	4.8%	—
Break Time	121	4.8%	80	4.5%	—
Idle Time	322	12.9%	0	0.0%	-12.9pp
Eff. incl idle		60.6%		85.4%	+24.8pp
Eff. excl idle		67.8%		85.7%	+17.9pp

**Wait time note:** Caire's 84h of wait exists because the solver respects visit time-window constraints. In reality, this time will not be idle — either the visit starts when the employee arrives (early start), or it is consumed by real-world variability: traffic jams, parking time, earlier visits taking longer than planned. This will be validated when comparing with actuals.

### By Shift Type — Manual vs Caire (2 weeks)

Both schedules broken down by day, weekend, and evening shifts. Caire improves all three — but the biggest gain is in day shifts where manual idle is highest.

	Day (07–15)	Weekend (07–14:30)	Evening (16–22)
Shifts	198 → 124	44 → 35	98 → 112
Visits	1700 → 1599	600 → 445	1322 → 1576
Avg visits/shift	8.6 → 13.1	13.6 → 12.6	13.5 → 14.1
Shift hours	1584 → 900h	330 → 240h	588 → 636h
Visit hours	861 → 777h	232 → 204h	423 → 534h
Travel hours	365 → 49h	85 → 14h	150 → 82h
Idle hours	291 → 0h	12 → 0h	19 → 0h
Avg idle/shift	88 → 0min	16 → 0min	12 → 0min

<b>Eff. incl idle</b>	<b>54.4 → 86.4%</b>	<b>70.4 → 85.3%</b>	<b>72.0 → 84.0%</b>
<b>Eff. excl idle</b>	<b>65.0 → 87.5%</b>	<b>68.5 → 86.7%</b>	<b>73.9 → 86.8%</b>
Travel %	23.1 → 5.4%	25.7 → 5.8%	25.4 → 12.8%

Values shown as Manual → **Caire**. Day shift idle drops from 88min to 0min avg — saving 291h over 2 weeks. Caire travel on day shifts is just 5.4% vs manual 23.1% (316h saved).

## Revenue & Cost Analysis — Manual vs Caire

**Assumptions:** Employee cost **230 kr/h**, visit revenue **550 kr/h**. No overhead (cars, admin staff) — pure field routing ROI. Both schedules compared over 2-week period.

2-week period	Manual	Caire	Difference
Visits	3,622	3,620	-2
Shifts	340	271	-69
Visit Hours	1,517 h	1,516 h	-1 h
Shift Hours	2,502 h	1,776 h	-726 h
Revenue	834,350 kr	833,956 kr	-394 kr
Staffing Cost	-575,460 kr	-408,449 kr	+167,011 kr saved
<b>Margin</b>	<b>258,890 kr</b>	<b>425,507 kr</b>	<b>+166,617 kr</b>
<b>Margin %</b>	<b>31.0%</b>	<b>51.0%</b>	<b>+20.0pp</b>

# Key Insights & Recommendations

## 1. Zero Idle Time — Solver Compressed Shifts

The solver eliminated virtually all idle time: Manual has 12.9% idle (322h/2wk), Caire has 0.2h ( $\approx 0\%$ ). This is why the two efficiency metrics now converge for Caire: incl-idle 85.4%  $\approx$  excl-idle 85.7%. For manual, the gap remains wide (60.6% vs 67.8%) because 322h of paid gap time is still baked in. Note: Caire shows 84h of 'wait' time due to visit time-window constraints. In practice, this buffer is absorbed by early visit starts, traffic variability, parking, and visits running over — it will not be idle time. Validated when comparing with actuals.

## 2. Travel Time Halved

Manual allocates 24.0% of shift time to travel (600h/2wk). Caire reduces this to 9.8% (174h) through geographic clustering and route optimization — saving 425h of driving over 2 weeks.

## 3. Day Shifts: Biggest Optimization Lever

Manual day shifts (07–15) run at just 54.4% efficiency with 88min avg idle. Caire lifts day shifts to 86.4% with 0min idle. Evening: 72.0%  $\rightarrow$  84.0%. Weekend: 70.4%  $\rightarrow$  85.3%. Day shift idle was the single biggest drag — the solver fixed it.

## 4. Fewer Shifts, Same Coverage — Visit Redistribution

Caire serves 81 clients with 271 shifts over 2 weeks (vs 340 manual) — 69 fewer shifts and 726 fewer paid hours. Note: evening shifts increase from 98 to 112 (+14), while day shifts drop from 198 to 124 (−74). The solver moved ~254 visits from day/weekend into evening windows where they fit within the allowed time windows. This is correct: many visits have flexible windows spanning both day and evening, and the solver picks the slot that minimizes total travel and shift time.

## 5. Profit Margin: +20.0pp

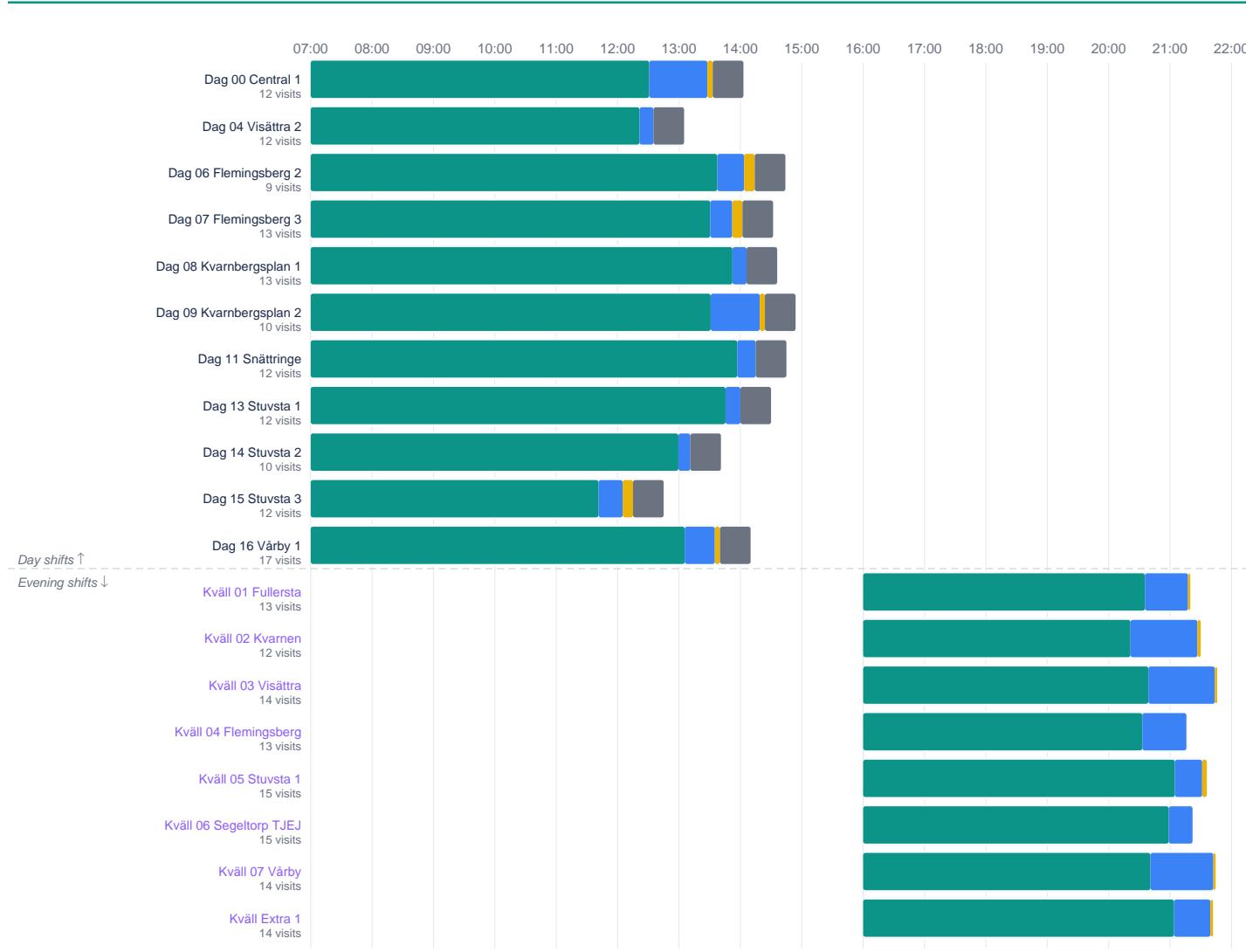
At 230 kr/h cost and 550 kr/h visit revenue (no overhead — pure field routing ROI): Manual 31.0% (258,890 kr) vs Caire 51.0% (425,507 kr). +166,617 kr more margin over 2 weeks. The gain comes from 726 fewer shift hours at 230 kr/h = 166,980 kr in staffing savings.

## 6. Solver: 3h, 105M Evaluations

Timefold FSR solved 2 weeks of scheduling in ~3h at 11,366 calculations/sec, evaluating 105,453,261 move combinations. Score: 0hard/-20000medium/-1902544soft. This level of combinatorial optimization is impossible to replicate manually.

## Caire Schedule — Monday 16 February 2026

Gantt-style view of all 19 shifts on a single day. Each bar shows visit time (green), travel (blue), wait (yellow), and break (gray). 242 visits across 11 day + 8 evening shifts.



■ Visit ■ Travel ■ Wait ■ Break 19 shifts · 242 visits · Mon 16 Feb 2026 · Caire-optimized schedule

### Feb 16 — Day Summary

	Day Shifts	Evening Shifts	Total
Shifts	11	8	19
Visits	132	110	242
Visit time	68.0h	38.0h	105.9h
Travel time	4.6h	6.0h	10.7h
Wait time	0.8h	0.2h	1.0h
<b>Shift time</b>	<b>78.8h</b>	<b>44.2h</b>	<b>123.1h</b>

## Visit Details — Sample Shift

Detailed itinerary for Dag 00 Central 1 on Mon 16 Feb, showing visit-by-visit timing, travel, and wait. This level of detail is available for every shift in the Caire output.

#	Type	Arrival	Start	Depart	Duration	Travel	Dist.	Wait
1	Visit■	07:16	07:16	07:46	30m	16m 19s	10.5km	—
2	Visit■	07:50	07:50	08:10	20m	3m 50s	1.8km	—
3	Visit■	08:11	08:11	09:11	1h	1m 43s	0.7km	—
4	Visit■	09:11	09:11	09:46	35m	0s	—	—
5	Visit■	09:54	09:54	10:09	15m	7m 18s	4.3km	—
6	Break	10:09	10:09	10:39	30m	0s	—	—
7	Visit■	10:09	10:39	10:49	10m	0s	—	—
8	Visit■	10:49	10:54	11:04	10m	0s	—	5m
9	Visit■	11:09	11:09	11:59	50m	5m 8s	2.4km	—
10	Visit■	11:59	11:59	12:29	30m	0s	—	—
11	Visit■	12:38	12:38	12:58	20m	8m 31s	6.9km	—
12	Visit■	13:11	13:11	13:17	6m	13m 3s	8.5km	—
13	Visit■	13:18	13:18	14:03	45m	1m 2s	0.4km	—

Dag 00 Central 1 — 12 visits, 1 break · Visit time: 331min (5.5h) · Travel: 57min · Wait: 5min · Distance: 35.6km · Shift: 07:00–14:03

### About This View

The Caire platform provides interactive schedule, map, and visit detail views for every day in the planning window. The schedule view (Gantt) shows all shifts side by side with color-coded time allocation. The map view shows geographic routes per vehicle with real driving distances. Visit details include arrival/departure, service duration, travel time, distance, and time-window compliance. All 14 days × 19 avg shifts = ~270 shifts are available in the full output.

■ = pinned visit (locked to specific vehicle, not reassignable by solver). Wait time appears when the solver respects a visit's earliest-start constraint. Break time between visits is counted as break, not wait. In practice, wait is absorbed by early starts, traffic, and visit overruns.