

OPTIMISATION PROPOSAL

Claims Processing

from Claims Processing (before) to Claims Processing (after)

OFFER FOR

Example Insurance plc
Ops Lead, Example Insurance
12 Example Road · Hamburg

PREPARED BY

Sample & Partners Process Consulting
A. Sample
1 Sample Street · Munich
contact@sample-partners.example

SAVING / YEAR

131k €

Operating cost +131k €

+ = adds to the saving

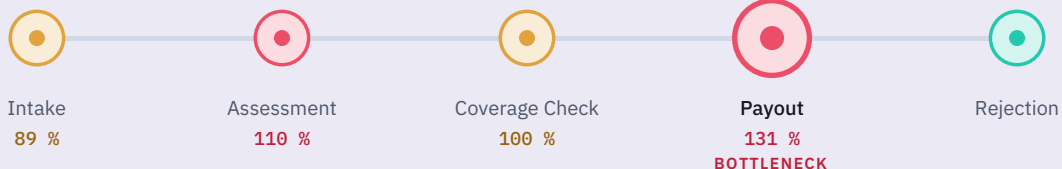
P10–P90 range: 127k € – 135k €

CYCLE TIME P90

–21.8 wd

wd = working days

In 100 % of the runs, “Assessment” is the binding constraint — 159 % on an average day, 252 % on a busy day. The change takes the pressure off it — the constraint does not disappear, it moves to “Payout” (binding in 81 % of the runs, 131 % utilisation on a busy day, P90).



Basis: busy day (1 in 10, P90) — utilisation on a busy day, roughly every tenth working day. Red = more work than capacity on such a day.

Measure: Capacity “Assessment” from 90.0 to 206 cases/day · Service time “Assessment” from 8.4 to 5.5 min
· Cost per case “Assessment” from 11.9 € to 7.8 €

Before / After

Metric	BEFORE	AFTER	Δ
Bottleneck	Assessment	Payout	•
Cycle time P90	28.1 wd	6.3 wd	-78 %
Throughput	80.8	115	+43 %
Capacity exceeded	79.8 %	33.3 %	-58 %
Cost per case	33 €	29 €	-12 %
Cost per day	3,960 €	3,436 €	-524 € -13 %
Cost per year	990k €	859k €	-131k € -13 %

Process before

Step	Type	Owner	Service (min)	Capacity per day	Cost per case	Share
Claims in	Start	—	—	—	—	100 %
Intake	Step	Service	6.0	218	6 €	100 %
Assessment	Step	Claims Team	8.4	90.0	12 €	100 %
Coverage Check	Step	Underwriting	9.0	200	9 €	100 %
Approve?	Decision	—	—	—	—	100 %
Payout	Step	Finance	7.0	105	7 €	70 %
Settled	End	—	—	—	—	70 %
Rejection	Step	Service	4.0	120	4 €	30 %
Withdrawn	Drop-off	—	—	—	—	30 %

Assumption: 120 cases/day · variability CV 0.35 · peaks ×1.5

STRESS-TEST EVIDENCE

Cycle P50 6.3 wd	Cycle P90 28.1 wd	Capacity exceeded 79.8 %	Throughput 80.8
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Step	P(constraint)	P(overload)	Average day	Busy day
Assessment	100 %	80 %	159 %	252 %
Payout	0 %	28 %	87 %	131 %
Coverage Check	0 %	10 %	65 %	100 %
Intake	0 %	7 %	61 %	89 %
Rejection	0 %	0 %	32 %	48 %

Colours: slack < 85 % · tight 85–100 % · overloaded > 100 % of capacity on that day.

Process after

Step	Type	Owner	Service (min)	Capacity per day	Cost per case	Share
Claims in	Start	—	—	—	—	100 %
Intake	Step	Service	6.0	218	6 €	100 %
Assessment	Step	Claims Team	5.5	206	8 €	100 %
Coverage Check	Step	Underwriting	9.0	200	9 €	100 %
Approve?	Decision	—	—	—	—	100 %
Payout	Step	Finance	7.0	105	7 €	70 %
Settled	End	—	—	—	—	70 %
Rejection	Step	Service	4.0	120	4 €	30 %
Withdrawn	Drop-off	—	—	—	—	30 %

STRESS-TEST EVIDENCE

Cycle P50 0.1 wd	Cycle P90 6.3 wd	Capacity exceeded 33.3 %	Throughput 115
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Step	P(constraint)	P(overload)	Average day	Busy day
Payout	81 %	28 %	87 %	131 %
Assessment	13 %	15 %	70 %	110 %
Coverage Check	6 %	10 %	65 %	100 %
Intake	0 %	7 %	61 %	89 %
Rejection	0 %	0 %	32 %	48 %

Options evaluated

Each of the 4 variants was re-simulated end to end — not extrapolated. The effect shown therefore includes the modelled knock-on effects across the rest of the flow.

RECOMMENDATION

Recommended: Automate “Assessment”. Around 310k € per year (range 304k € – 316k €, P10–P90 from the same runs). Afterwards the constraint moves from “Assessment” to “Payout”. The benefit stays positive even in the pessimistic (P10) case.

Option	Effect per year	Throughput Δ/day	Constraint afterwards	Verdict
Baseline — do nothing Reference case	—	80.8 cases/day	Assessment	
Automate “Assessment” halve service	310k € 304k € – 316k €	+32.7 cases/day	Payout	Recommended
Bundle: both +50% capacity · halve service	310k € 304k € – 316k €	+36.6 cases/day	Payout	Major project
Close break “Intake > ...” automate hand-off	170k €	—	—	superseded
Relieve “Assessment” +50% capacity	≈ 0	+24.8 cases/day	—	superseded

NOT WORTH DOING

- Close break “Intake > ...” — superseded by Automate “Assessment”: the same or a better effect at no greater investment.
- Relieve “Assessment” — superseded by Automate “Assessment”: the same or a better effect at no greater investment.

One stress test per variant: 400 runs · seed 42 · 250 working days/yr. Effect = difference to the baseline from the same runs (P50; range P10–P90).

Next steps & implementation

- Capacity “Assessment” from 90.0 to 206 cases/day
- Service time “Assessment” from 8.4 to 5.5 min
- Cost per case “Assessment” from 11.9 € to 7.8 €

With a one-off investment of 12,000 € the change pays for itself in about 23 working days. Basis: 131k € saved per year across 250 working days.

One-off investment: 12,000 €. Implementation & support on a time basis; terms on request.

Offer non-binding. Date as shown above.

Assumptions & data quality

Every figure in this document rests on the modelling assumptions below. They are listed in full so that any statement can be recomputed — and, where necessary, disputed.

Assumption	Value	What it drives
Working day	480 min (8 h)	Converts every cycle time into wd. Steps that state their own hours use those.
Working days per year	250	The basis of every annual figure — cost, saving, payback.
Stress test — runs	400	One run is one simulated day with its own volume and its own timings.
Seed	42	Random seed. The same model with the same seed reproduces exactly these figures.
Queue model	Kingman G/G/1	Waiting time grows with utilisation/(1 – utilisation). For steps staffed by several people this is deliberately conservative: the waiting time shown is an upper bound.
Linearised above	95 % utilisation	Above it the same curve is continued in a straight line instead of running to infinity; genuine overload is carried by the backlog (below).
Queue knee	85 %	Past it waiting time inflates sharply — the line above which a step counts as strained.
Backlog horizon	30 wd	The horizon an overload is averaged over (four working weeks). Every backlog and turnaround figure of an overloaded step scales linearly with it.
Outages — common cause	50 % system · 25 % owner	The rest is idiosyncratic. It changes only whether steps fail TOGETHER — each step keeps exactly the outage rate that was entered.
Media break — re-keying	4 min per hand-over	A flat figure, whatever the two systems are. Every media-break figure scales linearly with it.
Automation — touch time removed	manual 80 % · assisted 50 %	Estimated, not measured. The automation business case scales linearly with these two shares.
Cycle time — what is in it	handling + queue	Waiting arises from utilisation ALONE. Dwell time with no capacity cause — waiting on the customer, approval windows, nightly or weekly runs — is not modelled; real turnaround is correspondingly longer.
Saving — basis	work content × hourly rate	It prices the handling minutes freed, at the rate on the step. That becomes cash only once the capacity is actually removed or re-used — which posts those would be is what the reduction view shows (target staffing, fully loaded rate).

STILL ON DEFAULT VALUES

At export time these inputs were still on the value the app created them with — so the result is not running on your number. They drive it all the same.

Claims Processing

- Claims Processing — Volatility and disruption are still the defaults (volume CV 0.35; peak 12 % × 1.5; outage 6 % × 0.65; efficiency 85 %) — every P90 and tail figure rests on them

OPEN INPUTS

These inputs are missing or soft. Confirm them before any binding statement.

Claims Processing

- ! Intake — Service time is a point estimate — a range is more defensible
- ! Assessment — Service time is a point estimate — a range is more defensible
- ! Coverage Check — Service time is a point estimate — a range is more defensible
- ! Payout — Service time is a point estimate — a range is more defensible
- ! Rejection — Service time is a point estimate — a range is more defensible

Cycle times in working days (wd) of 8 hours; sub-process figures rolled up from the child models. Throughput counts every case that leaves the process, including those exiting through a drop-off.

Prepared by Sample & Partners · 1 Sep 2026 · Lens: Management