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Using AI to alleviate the manual burden of Affidea's billing and admin processes

A presentation by Rubytech for Affidea Switzerland

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INTRODUCTION

The consultants

Representing Rubytech are Joel Smalley and Mark Abbott. Joel has working experience in financial services, systems engineering, data management, quantitative analytics, FinTech, Web3 and AI. Mark has working experience in insurance, marketing, sales, customer relations, and project management.

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WHERE YOUR BILLING DATA SITS TODAY

The record of who owes what is split across systems.

You run a number of different systems: some within the same workstream, some outside it. None of them connect to each other. You see hundreds of thousands of patients a year across dozens of centres, and the record of who owes what is split across all of them.

IN THE BILLING WORKSTREAM	OUTSIDE THE BILLING WORKSTREAM	HOW THEY CONNECT	THE ONLY LINK
Billing	Clinical records	They don't	A person
Insurance files	Spreadsheets and reporting		Carries it by hand

The only thing joining these systems is a person who carries the information across by hand. Nothing else connects, so the backlog grows, payments arrive late, and the revenue figure changes depending on which system you ask.

THE MANUAL WORK TODAY, AND THE FIRST STEP

Give the data structure and rules.

The manual work today

To answer one question, someone opens the billing system, then the rejection file, then a spreadsheet, then the clinical record. They read across all four and type the answer back in by hand. When that person is away, the knowledge goes with them. And as patient numbers rise, so does the backlog.

The first step

The first step gives the data a structure and a set of rules. The system can pull what it needs from each source on request, so the data does not have to be moved into one place. On the structured store we set one fixed set of names and meanings, and the short list of jobs the system is allowed to do. Every record follows those rules. The structure is what lets the system work reliably.

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HOW THE AI WORKS, AND WHERE A PERSON DECIDES

The AI does the work. A person decides.

YOUR EXISTING SYSTEMS

Billing | Clinical records | Insurance files | Email | Spreadsheets and reporting

the AI reads and writes across the data

THE AI LAYER

Finds the file | Matches a rejection to its invoice | Drafts the reply

A person keeps the same access to every system. The work continues by hand whether or not the AI is running.

a person checks and decides

WHERE A PERSON DECIDES

Reviews the work | Adjusts or takes over | Final judgement and delivery stay with the operator

THE SAME ANSWER, EVERY TIME

The same answer, every time.

For billing, the same question has to give the same answer every time, and the working has to be visible. The system is set up so it does both. Three things hold the answer steady.

One fixed set of rules

Everything has one agreed name and one agreed meaning. An invoice is an invoice; a rejection reason is one from a known list. The system cannot invent a new category or quietly change what something means.

A short list of allowed jobs

The system can only do the specific tasks we have given it, and nothing else. It cannot wander off or try something we did not ask for. Every job is one we chose in advance.

A person checks and decides

The system shows its working and waits. A person reviews it, adjusts it or takes over. The final call always stays with your team.

RESULT

The same question gives the same answer, every time, and you can always see how it got there.

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USING AI TO HANDLE INSURANCE REJECTIONS

Read the rejection. Hand back a short list to act on.

Insurance rejection files arrive from the insurer.

A rejection file comes in. The AI does the first read and hands staff a short, ordered list to act on.

Group

Groups the rejections by the reason they were refused.

Suggest the next step

Suggests what to do next: resubmit, appeal, or pass it to a person.

Order by value

Puts the largest, most-recoverable amounts at the top.

RESULT

Staff spend their time on the rejections worth the most, starting with the ones that pay back soonest.

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USING AI TO DRAFT EMAIL AND PHONE REPLIES

The AI drafts the reply. A person sends it.

German, French, Italian, and English.

Patients and insurers write and call in four languages. The AI drafts in the right language and a person sends it. The AI never sends anything on its own.

Draft

Writes the reply, ready for a person to check.

Four languages

Works in German, French, Italian and English.

Summarise

Turns a long thread or call note into a few clear lines.

RESULT

Replies go out the same day, in the patient's own language, always verified by a person.

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A DASHBOARD SHOWING WHAT YOU'RE OWED

One live view of where the money is.

The dashboard reads from the centralised database, so its figures match the other systems.

AGING

0 to 90+

Receivables by age band, refreshed from source.

DSO & REJECTION TRENDS

Live

Days sales outstanding and rejection patterns tracked over time.

AI-PRIORITISED WORKLIST

Ranked

A daily queue, ordered by what recovers the most, fastest.

Labels shown are illustrative of the view, not measured results. The dashboard reflects your own live data once connected.

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HOW WE KEEP TO SWISS DATA PROTECTION LAW

The personal details never reach the AI.

The way you store, share and report data stays as it is today. The personal details that identify a patient are removed before any record reaches the AI.

The details are removed first

Before any record is sent to the AI, an automatic step strips out the personal details: names, dates of birth, patient numbers and the like. They are replaced with neutral tags.

The AI sees only the safe version

The AI only ever works on the de-identified record. It never sees who the patient is. The personal details stay on your side and are put back afterwards, when a person needs them.

It happens every time

The removal runs automatically, every time, as part of the normal flow. It is built into the step, so nobody has to switch it on.

RESULT

The AI runs on anonymised data by design, and patient identities never leave your control.

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KEEPING THE DATA ON YOUR PREMISES

Keeping the data in-house is a simple setup.

Housing the data on your own premises is straightforward. A single modest server is enough to begin a pilot.

A pilot houses nothing new

We read from the systems you already run, where they already sit. There is no new data store to stand up before we begin.

A separate store, if useful, is easy to run

If a separate store turns out to be useful, it is easy to put in and run on your own server. PostgreSQL is the standard option, and it meets Swiss data protection requirements.

Where the AI runs is the one choice

The personal details are removed before anything reaches the AI, so the heavy work can run wherever you choose. To keep everything inside your own walls, a modest server on your premises covers a pilot.

RESULT

The data stays on your premises, and one modest server is enough to begin a pilot.

IF A SEPARATE STORE IS NEEDED

PostgreSQL is a sound choice.

PostgreSQL is a mature, open database that runs on your own server. It is a well-understood choice for storing structured records like billing data.

Proven and widely used

Open and free to use, in service for decades across banks, hospitals and public bodies. Plenty of people know it well, so it is easy to support and hire for.

Runs on your own server

Installs on your premises, under your control. No licence fee and no tie to a single supplier.

Built for correct data

Enforces the rules that keep records consistent and accurate, which is what billing data needs. It keeps a clear, ordered record of every change.

Fits a regulated setting

Supports encryption, access controls and full audit trails, so you can show who saw what and when.

RESULT

PostgreSQL would run on the same modest server, on your premises, with no licence cost.

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ILLUSTRATIVE · APPROXIMATE

Discovery to pilot, in weeks.

Discovery
Learn where the time and money go.

Connect
Bring the data into one place; set up secure read access.

Pilot
Prove it on one job. Insurance rejections are a good first one.

Scale
Extend from the win.

Timings shown are approximate and illustrative, not a fixed commitment. The discovery step sets the real plan.

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