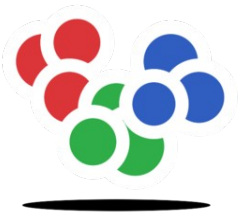

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OPINION WHITE PAPER

As Much Art as Science

The perils of over-trusting the numbers in contact-centre workforce planning

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An opinion piece in the ccPlanning white-paper series · read the rest at ccplanning.net

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1. The seduction of the number

Workforce planning looks like the most quantitative job in the contact centre. It isn't only that — and the gap between those two statements is where a great deal of damage gets done.

Of all the roles on a contact-centre floor, planning is the one that wears the lab coat. We have Erlang, a century-old piece of queueing mathematics. We forecast volumes to two decimal places. We run optimisation engines that search billions of rosters. We talk in occupancy, shrinkage, WAPE and forecast value add. It is, on the surface, the most scientific corner of the operation — and we have been only too happy to sell that image, to the business and to ourselves. A planner produces a number, the number is precise, and precision feels like truth.

This paper is an argument against that last step. The science is real and I will defend it. But the best planners I have worked with in thirty years share something the spreadsheets never taught them: they treat the number as the **start** of a judgement, not the end of one. They know which model to reach for and when to overrule it. They read the operation, the people and the politics as fluently as they read the forecast. They are, in a word, **bilingual** — fluent in the maths and in the messy human system the maths is meant to describe. Workforce planning is as much art as science, and forgetting that is one of the quietest, most expensive mistakes our profession makes.

> *The number is precise, and precision feels like truth. That feeling is the trap.*

2. First, give the science its due

Let me be clear about what this paper is not. It is not a licence to plan on instinct, to wave away the maths as "theoretical," or to dignify a gut feeling by calling it experience. That failure mode is just as real as the one I'm about to describe, and I'll come to it. The science of planning is hard-won and it works.

Erlang C will size a voice queue better than any amount of intuition. Decomposing a volume curve into trend, seasonality, day-of-week and intraday shape genuinely predicts demand. Forecast value add will tell you, honestly and uncomfortably, whether your clever model is beating a naive one. A capacity plan built from volume, AHT and shrinkage — grossed up properly — will catch a hiring gap months before a manager's hunch ever would. These tools are not decoration. They are the difference between a planning function and a person guessing with a calculator.

So the argument is not "ignore the numbers." It is "**don't worship them.**" The science earns its place precisely because it is rigorous and repeatable. The art earns its place precisely because the science, left unattended, is also blind, brittle and literal — and it cannot tell you any of that about itself. You need both, and you need to know which one you're using.

3. Where the numbers quietly mislead

A model doesn't announce when it has stopped being useful. It returns a number with exactly the same confident formatting whether it's right or catastrophically wrong. Here are the five ways that confidence leads planners astray.

False precision

A forecast that reads "9,148 contacts" implies a certainty the underlying data simply does not have. The fourth digit is noise dressed as signal. The danger isn't the decimal itself — it's what the precision does to the conversation: a number that specific shuts down challenge. Nobody argues with 9,148. They would happily argue with "roughly nine thousand, maybe more if the campaign lands." The honest forecast is a range with a reason, and the planner who only ever offers a point estimate has chosen the appearance of authority over the substance of it.

Every model rests on assumptions reality is happy to break

Erlang C assumes nobody ever abandons, that calls arrive purely at random, that each interval reaches a steady state, and that one pool of identical agents serves one queue. Every one of those is false in some operation, on some day. The maths is not wrong; the assumptions are simply violated, and the model has no way of telling you so. It will hand you a beautifully wrong answer with no asterisk. Knowing a tool's assumptions — and noticing when the day has broken them — is not an advanced topic. It is the whole difference between operating a model and being operated by one.

The moment a number becomes a target, it stops measuring

This is Goodhart's law, and the contact centre is its natural habitat. Set average handle time as an agent target and calls get rushed, customers get cut off, and the hard ones get transferred — the number falls while resolution falls with it, and the rushed contacts return next week as repeats. Chase occupancy into the nineties and you book an efficiency that is repaid, with interest, in attrition. The metric improves; the thing it was meant to represent gets worse. A planner who cannot see the behaviour a number will create is not yet reading the number properly.

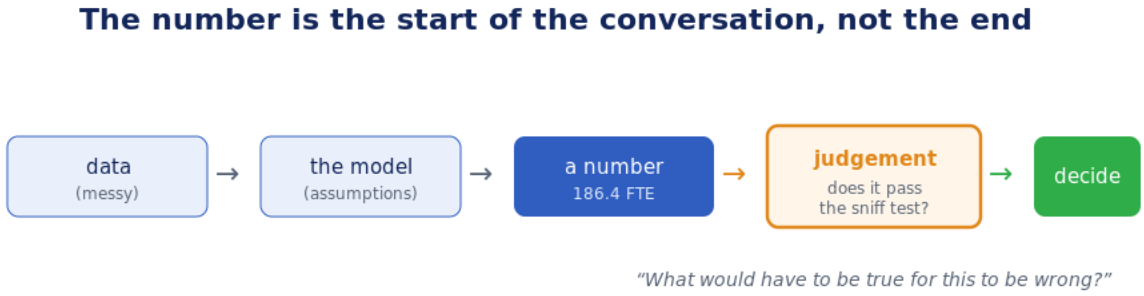
Garbage in, authority out

A model launders its inputs. Feed it a dirty history — an outage left in, a misrouted queue, a mislabelled spike — and it returns something that looks every bit as authoritative as a forecast built on clean data. The format hides the rot. This is why the unglamorous work of cleaning history matters more than the choice of method, and why "the system says" is the most dangerous sentence in planning. The system says what you fed it, in a confident voice.

The things the numbers cannot see

And then there is everything that never reaches the spreadsheet at all. A team that is one bad week from walking out. A new-starter wave that will drag AHT for two months. A product launch nobody told planning about. A manager whose adherence data you simply cannot trust. A Friday-afternoon mood, a snowfall, a viral post, a competitor's outage. The forecast sees none

of it. The experienced planner sees most of it — not because they are mystical, but because they are in the building, talking to people, holding context the data was never going to contain.



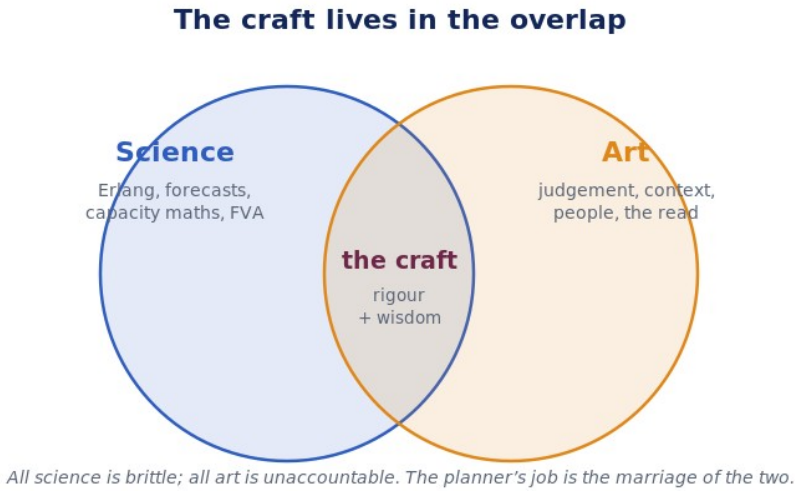
The number is an input to a judgement, not a verdict. The best planners interrogate it before they trust it.

> *A model returns a number with the same confident formatting whether it is right or catastrophically wrong.*

4. The art: what the experienced planner adds

If the science is the model, the art is everything you bring to deciding whether to believe it, how to frame it, and what to do next. It is harder to name than Erlang, which is exactly why it goes under-valued — but it is not vague, and it is not magic. It is a set of learnable judgements.

- **Judgement of method.** Knowing which tool the problem actually needs — naive, Holt-Winters, simulation — and resisting the pull toward the most sophisticated option when the simplest one that works would do.
- **Judgement of override.** Knowing when this particular forecast is wrong — because you know something the data doesn't — and having the nerve, and the record, to adjust it. And, just as important, knowing when your urge to override is the bias, not the model.
- **Reading the operation.** The context the numbers omit: morale, trust, the politics of a request, the difference between what was asked for and what is actually needed.
- **Pattern memory.** "I've seen this shape before." Years of days lived through become a library no model has access to — the planner's most under-rated asset.
- **Communication and trust.** A correct forecast nobody acts on has failed. Turning a number into a decision — framed for the person who has to make it — is the half of the job the maths never touches.



Science brings rigour; art brings wisdom. The craft of planning is the overlap, not either circle alone.

5. The danger lives at both extremes

It would be a cheap paper that argued only against the numbers. The failure is symmetrical, and the art-without-science end is every bit as dangerous.

All science produces the planner who hides behind the model — "the system generated it" — and abdicates judgement to a tool that cannot exercise any. It is brittle: confident right up to the moment its assumptions break, and then confidently wrong. It is blind to the human system, optimising a roster that is mathematically perfect and quietly unliveable. It mistakes precision for accuracy and accountability for arithmetic.

All art produces the opposite and equally useless planner: the one who runs on gut feel, whose forecasts cannot be challenged because they cannot be explained, whose "experience" is unaccountable, unteachable and unscalable. When the gut is right, no one can learn why; when it is wrong, no one can see how. A function built on instinct cannot be audited, improved, or handed to the next person.

Neither is craft. Craft is the marriage: the rigour of the science to keep the art honest, and the wisdom of the art to keep the science attached to reality. The science stops the art from fooling itself; the art stops the science from being fooled by the world.

> *The science stops the art from fooling itself. The art stops the science from being fooled by the world.*

6. A working discipline: how to hold both

This is not a counsel of balance for its own sake. It is a set of habits that let a numerate planner stay numerate without becoming naive.

- **Treat the number as the opening of a conversation, not the close.** The model's output is the first draft of a decision, not the decision.
- **Ask the wrong-ness question.** Before you ship any figure: "What would have to be true for this to be badly wrong?" Then go and check whether it is.
- **Let the science police the art.** Forecast value add, out-of-sample testing and honest accuracy metrics exist precisely to stop experienced planners from trusting overrides that don't actually help. Keep score.
- **Let the art police the science.** Every automated output gets a human read before it reaches a decision. A roster, a forecast, a deflection assumption — someone with context asks "does this make sense?" before it ships.
- **Write the judgement down.** The override you made, and why, is how art becomes teachable — the difference between a hunch and a method the next planner can inherit.
- **Invest in the context the data lacks.** The relationships, the floor-walks, the standups: they are not soft extras. They are how you acquire the information the forecast will never contain.
- **Quote ranges, not points.** Give decision-makers the honest spread and the assumption behind it. It is more useful, and more credible, than false certainty — and the day you're wrong, it is what protects your standing.

7. The planner's stance

The number is a tool, not an oracle. The spreadsheet is a servant, not a master. The model is a lens — it sharpens part of the picture and crops the rest, and the planner's job is to know what got cropped. None of this diminishes the science; it is what makes the science usable. A scalpel in untrained hands is just a sharp object.

Trust the numbers enough to use them properly; distrust them enough to keep thinking. Be the planner who can run the model **and** the one who knows when to put it down. That double fluency — the rigour and the read, the science and the art — is not a compromise between two halves of the job. It **is** the job.

> *Trust the numbers enough to use them. Distrust them enough to keep thinking.*

About the author

John Casey has spent more than 30 years in contact-centre workforce planning, including roles as a workforce-planning manager and operations director, and now writes and teaches at ccplanning.net. The views in this paper are his own. It represents general professional experience and is not affiliated with, nor does it represent, any current or former employer.

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