

A KEVIN DUNCAN PLAYBOOK

Betting on Bayes

A prioritisation framework that scores your confidence honestly, so gut feel stops disguising itself as data.

THE CORE PROBLEM

Your gut is not a prioritisation framework

The strategic bets that actually grow a business are rarely the result of trial and error alone.

Every roadmap is really a list of bets. Some pay off. Most don't. The skill isn't avoiding risk, it's sifting through a sea of conflicting data and opinion to work out which bets are actually worth making, and building a roadmap around those.

The trouble is that the part of your brain making that call evolved to be fast, not accurate. Cognitive biases are mental shortcuts that let us process information quickly, avoid overload, and reach decisions without waiting for complete evidence. They are where instinct and intuition come from, and for most of human history they worked well enough.

Imagine hearing something rustle in the bushes. You do not stop to calculate the odds it is a lion. You run. If you are wrong 95% of the time and it was never a lion, the cost of running was small. If you are right the one time in twenty, running saved your life. That trade-off made sense on the savannah.¹

It does not hold up in a roadmap review. In business, being wrong 95% of the time about which bets will pay off is not a survivable strategy.

Bayesian reasoning is a forcing function. It does not remove your instincts, it makes you show your working: what you already believe, what new evidence you have actually got, and how much that evidence should move your belief. Three honest questions do more to counter bias than good intentions ever will.

A STATISTICAL METHOD, MADE PRACTICAL

The Bayesian method, in plain English

Bayesian reasoning is a statistical method for estimating the probability of a specific future outcome. Strip away the maths and it comes down to three honest questions, asked every time you decide what to prioritise:

- What relevant prior knowledge can we bring to this problem?
- What new evidence should we actually consider?
- How does that evidence change the probability of achieving what we want?

Your prior is simply what you believed before you looked at any new evidence, informed by past launches, existing data, domain experience. New evidence, a user survey, a usability test, a behavioural data point, updates that belief up or down. What you are left with becomes the new prior the next time evidence arrives. It is a loop, not a one-off calculation.

For the mathematically curious. Bayes' theorem describes this updating formally, and dates back to a 1763 essay by the Reverend Thomas Bayes, communicated posthumously by Richard Price and later formalised by Pierre-Simon Laplace.² You do not need the equation to use the method. You need the habit of updating.

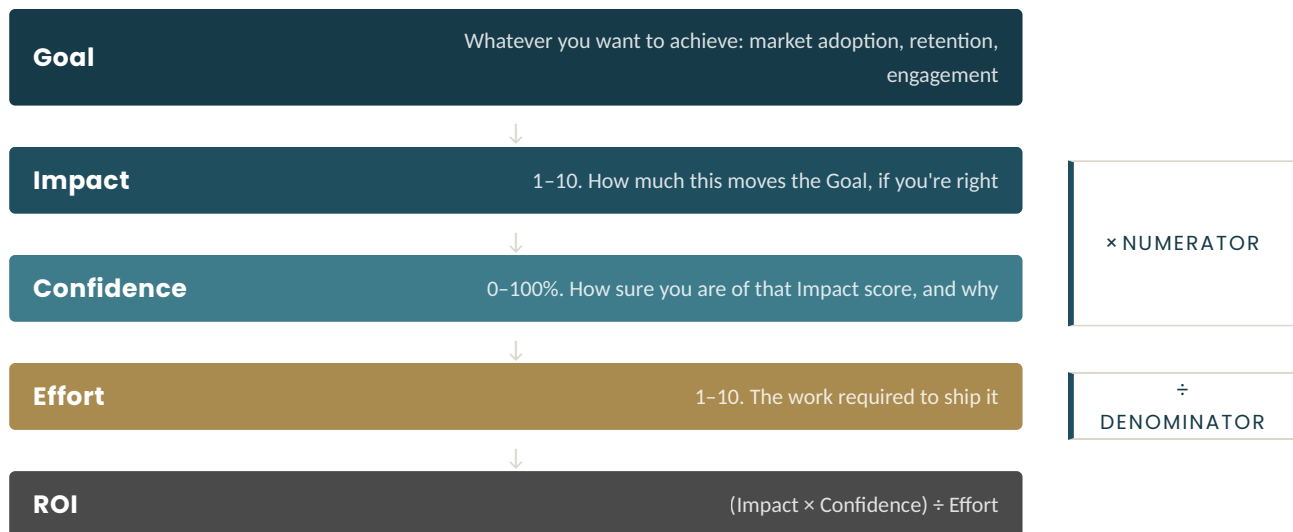
This maps neatly onto Lean product thinking

Build a minimum viable version, put it in front of customers, gather feedback, and use it to update your next move. Lean methodology and Bayesian reasoning are describing the same discipline from two different angles: do not bet everything on your prior, and do not ignore evidence when it arrives.

THE FRAMEWORK

Product roadmapping, Bayesian style

Four simple inputs, tied to one formula, keep a whole roadmap conversation honest. This framework borrows from two well-known prioritisation models, Sean Ellis's ICE score and Intercom's RICE score,^{3,4} and pushes the Confidence component further: instead of a gut-feel percentage, Confidence here is built from actual weighted evidence.



FOUR NUMBERS, ONE FORMULA

The four inputs

01

Goal

Tie every initiative to something the business is actually trying to achieve: market adoption, retention, engagement, revenue. An initiative with no named Goal is not a bet. It's a guess wearing a business case.

02

Impact

Score 1 to 10: if this works exactly as hoped, how much does it move the Goal? An 8 out of 10 means it would meaningfully shift retention; a 2 means you would barely notice. Impact is where ambition lives in the formula, score it honestly, not optimistically.

EXAMPLE

If the goal is retention and this piece will help a lot, score it 8 out of 10. If it's a nice-to-have with a marginal effect, score it 2 or 3.

03

Confidence

This is where the framework earns the name Bayesian. Confidence is a percentage representing how sure you are of your Impact score, not a feeling, a calculation. List the types of evidence you could collect, market research, user surveys, usability testing, behavioural data, and give each a weighting so they sum to 100%. Then go and actually collect it. Score confidence off what you've genuinely gathered, not what you hope is true.

Format — Confidence (%) = weighted sum of evidence collected, updated as new evidence arrives

Below 50% isn't worth scoring. Anything under a coin toss tells you the work is a moonshot, and that your priority should be gathering evidence, not shipping. Intercom's own RICE guidance draws the same line, treating sub-50% confidence as a sign to research further, not to proceed.⁴ Research on expert forecasting backs this up from a different angle: the best forecasters are not the ones with the boldest single guess, they are the ones who make frequent, small updates to a numeric estimate as real evidence arrives.⁵

04

Effort

Also scored 1 to 10, but here higher is worse: Effort represents the work required to ship the piece. It is the great leveller in the formula. A brilliant, well-evidenced idea that takes a quarter to build still has to earn that cost back.

PUTTING IT TOGETHER

Calculating ROI

$$\text{ROI} = (\text{Impact} \times \text{Confidence}) \div \text{Effort}$$

Impact increases ROI, but only to the extent you are actually confident in the estimate. Effort drags it back down. Run every initiative through the same formula and you get a ranked list, not of what's biggest, but of what's most worth doing next.

INITIATIVE & GOAL	IMPACT	CONFIDENCE	EFFORT	ROI
5 — Engagement	2	70%	1	1.40
3 — Revenue	9	60%	5	1.08
1 — Acquisition	7	85%	6	0.99
4 — Market Adoption	5	50%	3	0.83
2 — Retention	3	99%	10	0.30

What this table actually teaches you. Initiative 5 tops the list with the lowest Impact score on the page, purely because it is nearly effortless and reasonably well evidenced. Initiative 2 has the highest Confidence by far, 99%, and still finishes last, because an Effort score of 10 drags it to the bottom. The formula does not reward the boldest idea or the safest one. It rewards the best trade.

One caution. Do not treat ROI scores as directly comparable across different Goals. A 1.40 aimed at Engagement and a 0.99 aimed at Acquisition are only truly comparable if the business values those two goals equally, which it usually does not. Rank within a Goal first; compare across Goals only once you have weighted the Goals themselves.

Treat the resulting list as a pair of Bayesian glasses, not a finished roadmap. It's there to help you see the trade-offs more objectively before you commit resources, not to make the decision for you.

WHERE THIS BREAKS DOWN

Common pitfalls

- ✗ **Scoring confidence off hope, not evidence.** If you cannot point to the market research, survey, test or behavioural data behind a Confidence score, it isn't a Confidence score. It's a guess with a percentage sign.
- ✗ **Shipping below 50% confidence anyway.** A sub-50% score is a flag to go and gather evidence, not a number to round up because the deadline is close.
- ✗ **Never revisiting a score.** The whole point of Bayesian reasoning is that new evidence updates old beliefs. A score set once at kick-off and never touched again is not Bayesian, it's just an opinion with decimal places.
- ✗ **Weighting every evidence source equally.** A throwaway anecdote and a proper usability study are not the same strength of evidence. Weight them accordingly, or your Confidence score is fiction.
- ✗ **Comparing ROI across unrelated Goals as one league table.** Rank within a Goal before you rank across Goals, and only once the Goals themselves have been weighted against each other.
- ✗ **Treating the ranked list as the roadmap.** The list is an input to a decision, not the decision itself. Judgement, dependencies, timing and team capability still matter.

THE CANVAS

Build your own

Score three or four real initiatives you're actually weighing up right now. The value is not the arithmetic, it's being forced to write down your evidence before you write down your confidence.

EVIDENCE WEIGHTING (SHOULD SUM TO 100%)

Market Research ____% User Surveys ____% Usability Tests ____% Behavioural Data ____%

INITIATIVE & GOAL	IMPACT	CONFIDENCE	EFFORT	ROI

ROI = (Impact × Confidence) ÷ Effort. Fill in Impact, Confidence and Effort, then calculate ROI yourself, don't skip the arithmetic, it's the whole point.

THE AUTHOR

About Kevin Duncan



Kevin Duncan is a product and digital transformation leader with over a decade of experience delivering product strategy and large-scale change across financial services, government and consumer sectors in the UK.

He has led product and outcome-based planning for organisations including the UK Government, Yell and LMS, and currently leads product strategy and transformation for the UK mortgage and property ecosystem as Product Director at Novus Strategy & Consulting.

This playbook is drawn from workshops Kevin has run with product teams on prioritising with more rigour than a gut feeling and less overhead than a full data science function.

Want help building a Bayesian view of your own roadmap?

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References

1. Tversky, A. and Kahneman, D. (1974) "Judgment under Uncertainty: Heuristics and Biases." *Science*, 185(4157), pp.1124–1131. See also Kahneman, D. (2011) *Thinking, Fast and Slow*. New York: Farrar, Straus and Giroux.
2. Bayes, T. (1763) "An Essay towards solving a Problem in the Doctrine of Chances." *Philosophical Transactions of the Royal Society*, communicated by Richard Price; later formalised by Pierre-Simon Laplace.
3. Ellis, S. developed the ICE score (Impact, Confidence, Ease) at GrowthHackers, a precursor to RICE.
4. McBride, S. developed the RICE score (Reach, Impact, Confidence, Effort) as a product manager at Intercom, extending Ellis's ICE with a Reach factor.
5. Tetlock, P.E. and Gardner, D. (2015) *Superforecasting: The Art and Science of Prediction*. New York: Crown.