I'm 95.4% confident you'll like this

Glenn Lyons, Mott MacDonald Professor of Future Mobility at UWE Bristol, discusses his frustration (pictured, right) with false precision

False precision I understand to be the offering up of analytical results that are presented, knowingly or not, to a level of precision that is simply not warranted or justifiable and which may mislead the unwary recipient. It drives me mad.

Let me get straight into this with some examples. Here's a real howler for starters: 'The global mobility as a service (maas) market size is expected to grow from USD 4362.60m in 2022 to USD 94035.41m by 2033.'

Yes folks, emerging from a pandemic it is possible to be confident to seven significant figures looking a decade into the future. I have a theory – the bigger the day rate charged for soothsaying like this, the more significant figures you get.

Here's a beauty I heard at a UK transport conference recently: 'The benefits could range from £308m to £804m.' Dang, these guys are good; I mean, perish the thought of saying 'somewhere between about £300m and £800m; we're not really sure.'

The Department for Transport's (DfT) 2011 Road Traffic Forecasts report (back in the good old days of more certainty about the future) offers a nice touch: 'The key results this year are an increase in traffic vehicle miles of roughly 44% between 2010 and 2035.' Roughly 44% – almost sounds like an oxymoron to me.

I've saved my current favourite for last. After waiting two years for the revised National Networks National Policy Statement draft (which left a lot to be desired in many ways in my view), when it did come out in March this year it was able to draw upon the DfT's latest 2022 Road Traffic Projections. These projections reflect a range of scenarios depicting future uncertainty.

Here comes the prize-winning quote, which ignores these and focuses only on the core scenario ('core' sounds like code for 'most likely', though it's not meant to be). The quote considers change between 2025 and 2060: 'Increases in the number of seconds of time lost due to congestion on motorways also varies under the Core scenario; from 81.8% in one region to 215.5% in another.' Yep, whereas the 2011 example above dared not venture into decimal places, this one shows no fear – looking 35 years into the future at seconds of lost time to the nearest tenth of a percent of change. And guess what the first sentence of the paragraph immediately following this quote says? 'These projections are not definitive predictions of what will happen in the future.' Not definitive but delivered with laser sharp precision.

> ***The danger with false precision is we become deluded into thinking we've got uncertainty licked***

Check out benefit:cost ratios – they have no problem going to two decimal places for a 60-year appraisal period. Indeed, the real pros can take it to three decimal places. Values of travel time – look those up in Transport Appraisal Guidance – weigh in to the nearest penny of value per hour. Spot on!

And academics are at it too. Give me a response sample of 68 people and I'll offer up results to at least the nearest percentage point if not push it further – '54.4% of the sample were female' (meaning 37 out of 68 people). I made that one up but you'll find others like it if you keep an eye out.

I abandoned Twitter when Musk took over. But before I did, I had set up an account called False Precision where I would tweet the worst examples within and beyond transport of people over-reaching in terms of implied levels of confidence in figures they produced.

Maybe it's just me – a phobia I have – but I see false precision as both amusing and egregious. My question to you is this: does false precision matter?

When it comes to our sector's efforts to weigh up big investments for the future, I believe it does matter. I do a lot of work in scenario planning – helping people think the unthinkable about the future by exploring possibilities of what could unfold.

We often tend to use narrative rather than numbers. But I know full well how powerful introducing numbers can be. They focus the mind and start to play on the psyche through our sector's long history of quantitative modelling and forecasting.

Numbers can conjure up a sense of someone really knowing their stuff about the future – boosting confidence in the analysis; and the more precision, the bigger the effect can be. Yet many would agree that uncertainty about the future is deep at the moment. The danger with false precision is we lose sight of that and become deluded into thinking we've got uncertainty licked.

The reality is that we need to be able to embrace and accommodate uncertainty, not conceal it, if we are to support robust decision-making that minimises future regret and which, hopefully, shows stewardship over the future.

As the saying goes, it is better to be approximately right than precisely wrong.