

Who Maintains the Immune System? The Case for TOPAS

A follow-on from 'Standards Are Infrastructure's Immune System'

Hey, it's me again. Christophe, Chief Technologist at TRL.

Cast your mind back to my last piece on why standards matter (<https://highways-news.com/topas-can-we-no-longer-afford-standards>). That was the grounded state of things as they were, a clear-eyed look at what happens when the infrastructure of infrastructure gets quietly abandoned, when the institutional memory crystallised into specifications gets treated as an overhead rather than an asset. I hope it landed.

Well. I'm back. And this time I'm turning the volume up to eleven.

Because if the first piece was about what standards do, this one is about who sustains them, and why that question is more urgent, more fragile, and more consequential than almost anyone in this industry is currently admitting out loud.

The answer, in the UK traffic management and roadside equipment world is TOPAS. And the uncomfortable truth is that organisations like TOPAS do not happen by accident, do not sustain themselves by accident, and absolutely do not survive by accident when the funding environment turns hostile.

They exist because of people.

Specific, knowledgeable, deeply committed people, from government, from the user community, from manufacturers, who give their expertise, their time, and their professional credibility to something that benefits the whole industry rather than just themselves.

The sum of TOPAS is emphatically greater than its parts.

Strip away those parts, the individuals, their knowledge, and critically the active industry support that makes their involvement possible, and you do not have a slightly diminished TOPAS.

You have nothing. And nothing, in a market that depends on interoperable, independently verified, safety-assured equipment, is an extremely expensive outcome.

So let's talk about it properly.

More Than Traffic Lights

Before we discuss what TOPAS might lose, it is worth being clear about what TOPAS actually is, because the organisation is routinely underestimated, even by those who rely on it.

TOPAS is not a traffic signals club. Its portfolio of around twenty-five live technical procurement specifications covers the breadth of UK roadside equipment: traffic signal controllers, variable message signs, vehicle detection, pedestrian demand units, including the touchless standard rushed through during COVID, tramcar light control, over-height vehicle detection, rising bollards, portable signals, passive safety certification, and the entire UTMC interface family, which transferred to TOPAS ownership from the dormant UTMC Development Group in late 2024 and was formally completed in May 2025. That transfer matters.

At the precise moment DfT is signalling that it cannot sustain the old model of department-funded standards stewardship, TOPAS stepped forward to absorb a specification suite that would otherwise have had no institutional home. It took on more. It did so on the same thin financial base it has always operated on.

That is not a sustainable trajectory. It is a warning.

The Governance Model Nobody Talks About

TOPAS operates on a tripartite governance model that should be held up as a template for exactly how to run an industry standards body, namely a board comprising:

- 1) Central and Devolved Governments;
- 2) User organisations including National Highways and Local-authority representatives;
- 3) Manufacturers through ARTSM.

No single interest group controls it. All three must reach workable consensus for a specification to advance.

This is structurally rare and genuinely valuable. It means manufacturers cannot write specifications that only their products pass. It means government cannot mandate requirements without user and industry scrutiny. It means local authorities cannot demand the impossible without engineering input. The product register, which distinguishes genuinely assessed products from those merely claimed to be compliant, is the output of that tripartite discipline. That distinction matters more than it sounds.

A manufacturer can describe a product as "compliant" with a TOPAS specification without having submitted it to any independent Technical Assessor. A registered product has been assessed. The two are not equivalent, and every procurement officer who treats them as equivalent is spending public money on a promise rather than a result.

The Funding Cliff

TOPAS is a micro-entity in Companies House terms, turnover and balance sheet both below £50,000. Its income rests on three legs: product registration fees of £1,200 per product; in-kind technical contribution from ARTSM members, provided at no cost to TOPAS; and time-limited project support from the Transport Technology Forum under a 2023 Memorandum of Understanding, itself funded by a three-year DfT and Innovate UK grant running to 2025–26.

Now read that again.

The organisation responsible for the technical procurement standards underpinning hundreds of millions of pounds of annual roadside equipment spend across every highway authority in Britain runs on registration fees, goodwill, and a grant that expires.

Meanwhile, the wider DfT context is unambiguous. The £20 million Intelligent Traffic Management Fund was cancelled in 2025, described by ITS UK's Chief Executive as "an own goal for Government". The Spending Review 2025 caps DfT spending growth at 0.5% in real terms per year to 2028–29. The Department's 2024–25 annual accounts recorded £428 million of impairments on cancelled road schemes. The Restoring Your Railway fund, £500 million, was cancelled at a stroke.

In a department making cuts at that scale, a small not-for-profit standards body with no statutory footing and no endowment is precisely the kind of item that disappears between the lines of a budget spreadsheet.

Not maliciously.

Just quietly.

Because nobody had made the cost of its absence visible enough.

It is worth pausing here to contrast TOPAS with the Transport Technology Forum, (TTF) because the comparison is instructive, and speaking frankly, a little uncomfortable. The TTF is a fine initiative. It received £1 million from DfT and Innovate UK, administered through LCRIG, to promote transport technology innovation and industry engagement. It even signed a Memorandum of Understanding with TOPAS in 2023, committing to provide project support to specification development. Genuinely useful. Welcome. And there, embedded in that single word, is the entire problem. Project support. The TTF is, by design and by funding model, a spark, well-intentioned, energetic, and time-limited. Standards, by contrast, are the boiler that has to keep the building heated in February, in July, and in every February and July for the next thirty years.

The uncomfortable truth is that TOPAS, the permanent institution, is partly propped up by the temporary one. The boiler is borrowing heat from the spark. That is precisely the wrong way round, and if anyone in DfT's funding team has noticed the irony, they have been admirably quiet about it. TOPAS needs to be here for a long time, not a good time.

The Cost of Its Absence

We know what happens, because we have watched it happen before. The UTMC Products Catalogue was discontinued in December 2014 when the UTMC Development Group went dormant.

Traffic Advisory Leaflets from the DfT's Traffic Advisory Unit have effectively ceased. Statutory Type Approval ended in 2016.

Each time, the same pattern: a low-cost, high-leverage standards function is quietly wound down; the market fragments; local authorities write bespoke specifications at their own expense or accept vendor self-certification; interoperability erodes; and the long tail of wasted integration spend is distributed across dozens of individual highway authority budgets where it is invisible in aggregate but enormous in total. In my first piece, I described a procurement officer proudly saving £50,000 on non-compliant controllers, then haemorrhaging money on emergency call-outs, custom integration, and systems that cannot communicate with each other. That is not a hypothetical.

Remove TOPAS registration as a meaningful procurement criterion and it becomes the default outcome, replicated at scale, across Britain.

Now consider the timing. ITSUK the Stuck on Red campaign, calling on Government to fund a rolling renewal programme to address what it has rightly named the UK's DOTT-hole problem (Digitally Obsolescent Traffic Technology). The campaign's own data makes uncomfortable reading. A substantial proportion of traffic signal controllers across England are already at or past life expiry, with the situation worsening materially over the next two years under a do-nothing scenario. The consequences, road safety risk, congestion, carbon inefficiency from halogen-era equipment still in live use, cyber vulnerability, and an inability to integrate with AI or autonomous vehicles, are well-documented and entirely real.

It is a compelling, urgent, well-evidenced campaign. I support it wholeheartedly. And here is the problem hiding in plain sight: that renewal wave, potentially thousands of controllers, detectors, signs, and pedestrian facilities procured across over a hundred and fifty highway authorities, will only deliver the interoperable, future-ready infrastructure the campaign promises if the products being installed have been independently assessed against consistent national standards. In other words, it only works if TOPAS is healthy, trusted, and fully functional at exactly the moment the procurement starts.

You cannot fill the DOT-hole with equipment that hasn't been through the register. Or to put it even more plainly: ITS UK is rightly demanding the Government fund the renewal. Nobody seems to have paused to ask whether the quality assurance mechanism for the fill material, TOPAS, is itself in a condition to handle the load.

A renewal programme procured without robust TOPAS compliance is not modernisation. It is the same problem, deferred by one product generation, and considerably more expensive the second time around.

What Champions Look Like

TOPAS, to its credit, does not describe itself as being in crisis. Its public posture is forward-looking, the 2500 controller specification review is under way, new UTMC system-to-system specifications are in development, tramcar and pedestrian standards have just been updated. It does not need sympathy. It needs champions. Champions look like this:

- Local authorities that mandate TOPAS-registered products in tenders, not "compliant", registered, and refuse to treat the two as interchangeable. Framework owners and combined authorities that embed registration as a non-negotiable procurement criterion.
- Manufacturers that register every product version, every revision, because £1,200 against a framework contract value is trivial and the cumulative effect of universal registration is what keeps the fee income stable enough to sustain the body.
- DfT policy leads who make the case internally for a modest, indexed core secretariat budget, a figure that, in departmental terms, would be a rounding error, and that would buy something DfT cannot easily rebuild once it is gone.
- TOPAS was created to demonstrate that industry self-governance could deliver higher standards than government mandate. That was always an argument about quality, not cost. But quality requires continuity, and continuity requires a funding model that does not depend entirely on whether this year's product registration pipeline holds up.

The Question That Needs Answering

As AI-driven adaptive control, connected vehicle interfaces, and smart city data layers reshape what traffic management equipment needs to do, the specifications governing that equipment become more important, not less. The AI wild west we described in our first piece, every vendor claiming their black-box algorithm is intelligent, with no common framework to verify, validate, or ensure interoperability, is not an abstract future risk. It is the present, in the domains where TOPAS does not yet have a specification.

The question is not whether we can afford to sustain TOPAS. It is whether the people who benefit most from what it does, procurers, manufacturers, users, government, are willing to make that case loudly enough, and act on it concretely enough, before the funding question answers itself.

Boring infrastructure done right is what makes exciting innovation possible. The organisations that maintain it deserve more than goodwill. They deserve a seat at the table, a line in the budget, and champions who understand the cost of their absence.

Christophe is Chief Technologist at TRL. TOPAS is a not-for-profit company registered in England and Wales (Companies House number 09132907). Further information about TOPAS specifications and the product register can be found at topasgroup.org.uk.