

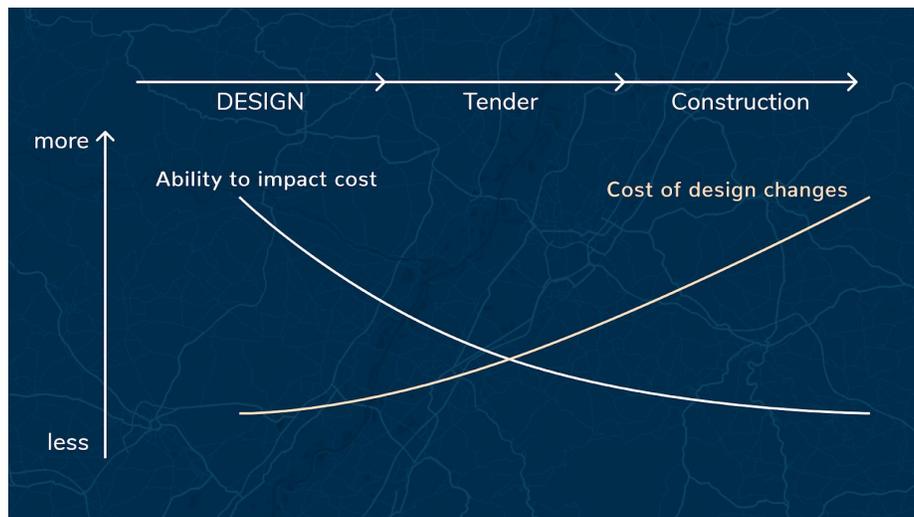
## EXECUTIVE SUMMARY

We are Continuum Industries and we want to supercharge infrastructure design with AI.

Our vision is not to replace designers, but to give them superpowers. With our AI-driven tool, Optioneer, they can now automate their existing design process and use our advanced AI algorithms to design better infrastructure in a fraction of the time it takes right now.

### Why do we need AI?

The majority of big decisions that drive costs, performance and carbon emissions in infrastructure projects are made in the design phase. Big design budgets should therefore mean better infrastructure projects, but that just isn't always the case. Why?



We think it's because designers are still using the same old tools like Excel, Google Earth and AutoCAD to design infrastructure projects. These are manually driven tools that were simply not built to cope with the myriad interdependencies in infrastructure systems.

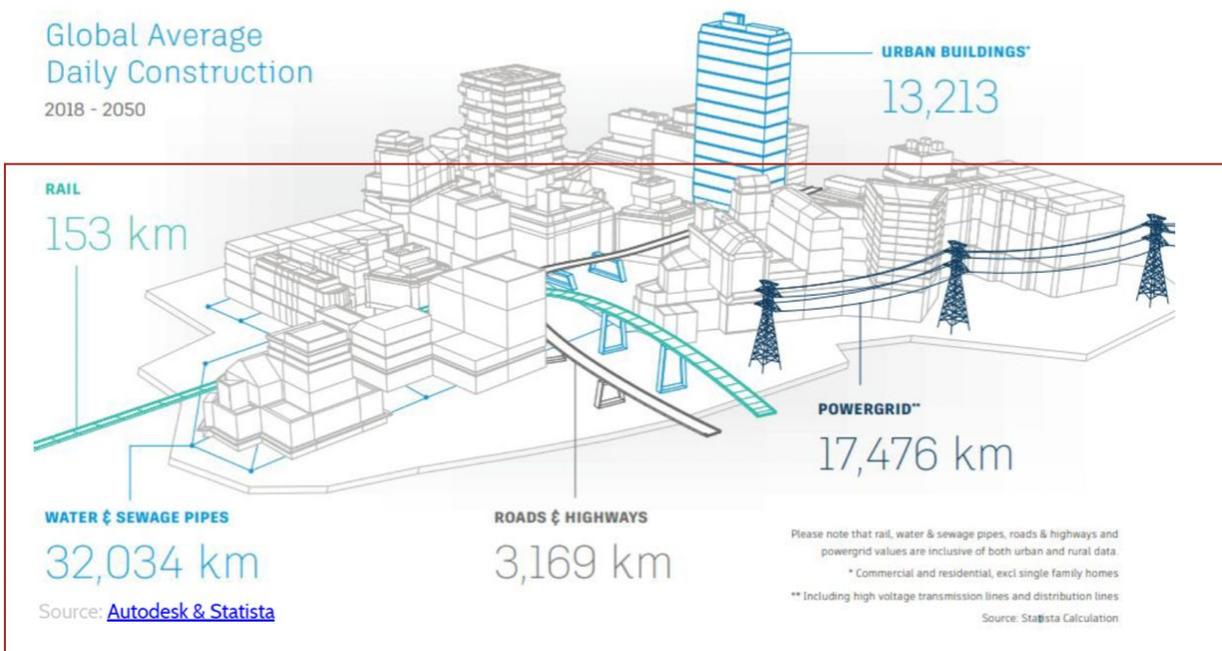
Inevitably, designers have to simplify everything to explore a handful of options. They then pick one option using that information and spend most of the design budget on filling in the details, uncovering issues, and justifying their design afterwards. The results are there for all to see: cost increases, delays and political problems even before construction starts.

Designers should be exploring far more options in much higher levels of detail from the start of projects and interrogating all of the design interdependencies to spot potential issues. To do that though, they need more powerful tools that can handle more complexity and reduce the amount of time and effort needed to iterate through lots and lots of design options.

## How can we apply AI?

We see a huge global opportunity to do this straightaway in linear infrastructure projects like railways, roads, pipelines and power lines. Why can linear infrastructure benefit so much from AI? Because the design work is highly repetitive and rule-based. In other words, there is a huge amount of number-crunching - and that can all be automated and supercharged with AI.

The beauty of linear infrastructure is that we build it everywhere, but the design rules don't change much in different countries. The main things that do change from a design perspective are the terrain and cost of infrastructure components.



Currently, we are working with a number of major engineering consultancies and contractors to automate their design rules for linear infrastructure and exploit our advanced AI algorithms. Our product, Optioneer, generates and evaluates millions of design options over a few hours to find the best ones - and it helps users to optimise for lots of different objectives like cost, performance and carbon emissions too.

The Infra Challenge is a major opportunity for us to widen our platform and engage directly with governments, infrastructure owners and investors, who stand to benefit the most from our technology. We decided to take part in the Infra Challenge to spread the message to these stakeholders that AI in infrastructure design can help to increase confidence in design work, enable faster decisions and generate significant cost savings in infrastructure projects.