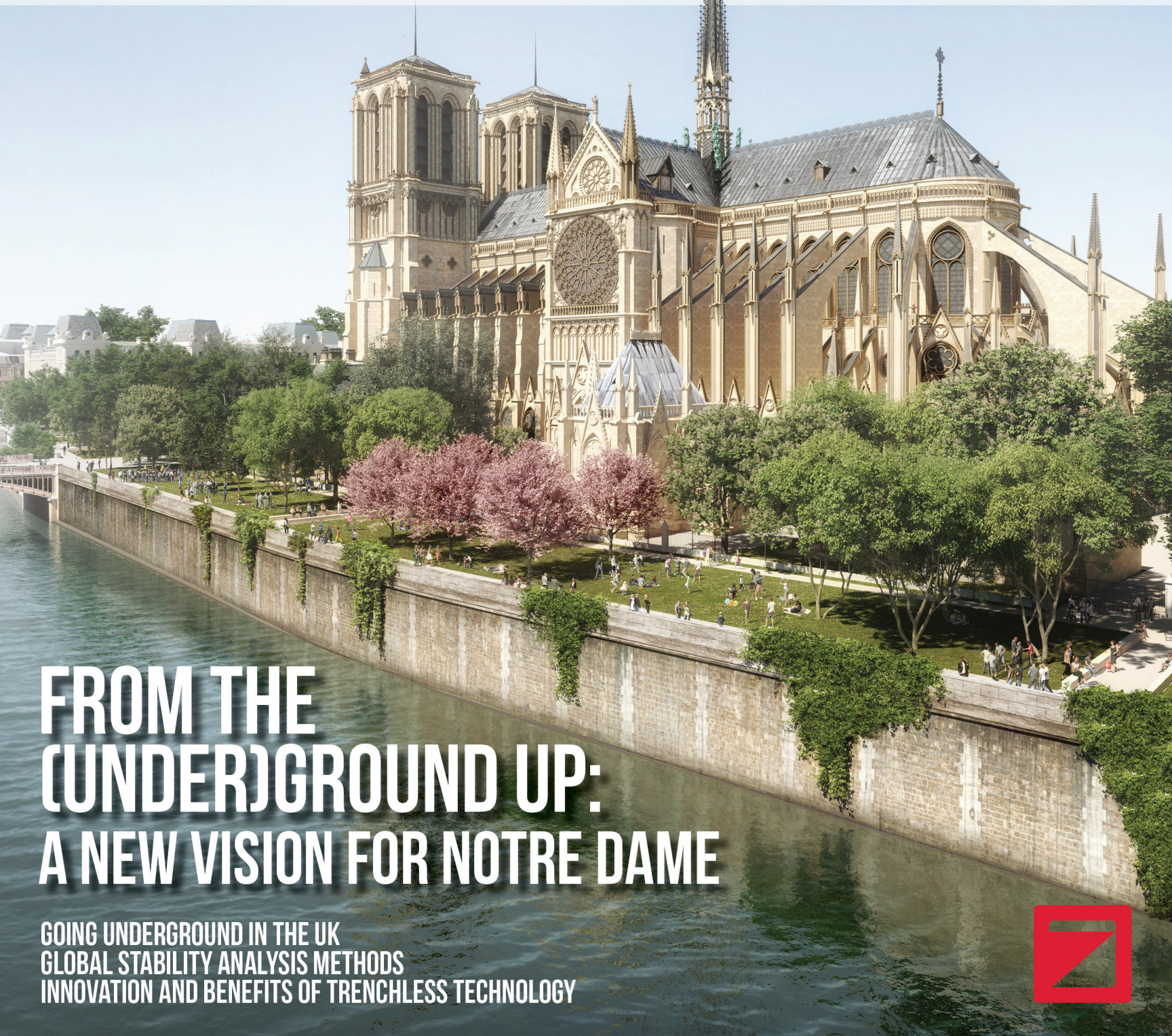


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# civil + structural ENGINEER

CELEBRATING THE DESIGNERS OF THE WORLD AROUND US



## FROM THE (UNDER)GROUND UP: A NEW VISION FOR NOTRE DAME

GOING UNDERGROUND IN THE UK  
GLOBAL STABILITY ANALYSIS METHODS  
INNOVATION AND BENEFITS OF TRENCHLESS TECHNOLOGY





where they can physically see what's happening. Assigning them field duties as one part of their early training adds value to the engineer and their organization.

Many graduating engineers have their first real glimpse of engineering and design behind a computer screen for eight hours. Using software, these fresh engineers can "see" the roadway crossings and pipeline's profiles underground. While they are visualizing the design, there can be an inevitable disconnect to its practical application in the field.

The relationship between engineers who are tasked with designing functional, maintainable, and sustainable infrastructure and those professionals who are tasked with operating, maintaining, and preserving that infrastructure can be strengthened. That collaboration can be bolstered by exposing design engineers to real life practical situations in the field – actually watching infrastructure be constructed. Day-to-day site observations create "anchors" by demonstrating good engineering practice and design principles.

If we know living and breathing examples give more anchors to tie the memory to, we should be motivated to develop that opportunity. Engi-

neers are fortunate enough to have the luxury of multiple "classroom" settings that can enrich their learning experience. The desire to grow and continuously develop should motivate engineers to utilize multi-sensory education settings, such as job sites, to engage both sides of the brain and increase the ability to store information longer than lectures or reading alone.

Lessons learned in the field are often fast paced. It is a new challenge for young engineers but promotes rapid development and maturity for the design professional. Our profession thrives on continued education, so why waste time? Field work brings your projects to life, and isn't this why we became engineers: to build things.

As an industry, those new to engineering need field exposure and the opportunities to experience it. As Reeves and Duehr point out, this is part of an engineer's education and serves as a good foundation for developing infrastructure solutions. By doing so, it supports the evolving needs of the public and serves to continuously improve the quality of life for the communities we serve.



## FORECASTING 2023 WITH HILL INTERNATIONAL'S RAOUF GHALI

By Luke Carothers

**IN AUGUST 2022**, news broke that Global Infrastructure Solutions Inc. (GISI) would be acquiring Hill International. This move comes as a part of GISI's strategic objectives of global diversification and expansion of its consulting platform. Hill International is set to become a wholly-owned subsidiary of GISI, but they will continue to serve its customers under the same name. This change will make Hill International part of GISI's Engineering & Consulting Services platform along with sister companies the LiRo Group, GEI Consultants, J. Roger Preston Limited (JPR), and Asia Infrastructure Solutions.

While the name and way of doing business will remain the same, Hill International will now benefit from expanded access to operational expertise and resources to accelerate its growth. For Hill International CEO Raouf Ghali, this merger means that the company will have access to the funds and resources to match the organic growth path that had already been laid out by their previous success. Ghali notes that, with access to new financial instruments, Hill International is able to

continue pursuing large-scale projects where heavy working capital is becoming more and more necessary. According to Ghali, Hill's previous status as a publicly-held company meant that a big part of management's focus was satisfying reporting requirements to the SEC. Now, as a part of GISI, this focus can now be shifted to managing the company and its growth. Furthermore, Ghali points out that this move aligns the company's growth with shareholders who share the same vision. With this new merger, Ghali believes that Hill International will grow its business in both the United States and internationally.

From an organizational perspective, Hill International's merging with GISI also poses significant benefits. Prior to its acquisition, Hill International maintained a staff of around 3,200 employees. Now, part of an organization with more than 12,000 employees, Hill International has a much greater pool of talent and technical knowledge to draw from. Not only does this help from a talent perspective, but it also pays dividends in relationships with clients. A large workforce coupled with a diversity of specialties means that they are able to cross-sell services to their clients better than ever before. Ghali describes this as a "one-stop-shop" for clients to find what they're looking for.

The timing of this acquisition seems to put Hill International in an advantageous position as many are forecasting challenges and headwinds in 2023. There has been no shortage of discussion about the challenges facing our supply chains, which Ghali believes is slowing down the



deployment of robust infrastructure spending in the United States. To overcome supply chain challenges, Hill International has been reassessing the sequencing of their projects. While supply chains continue to catch up, firms are changing the way they complete projects, completing smaller, easier to source portions first while waiting for the rest of the materials. Ghali says that, by doing so, projects are able to curb up-front spending to counteract some of the effects of supply chain constraints. However, citing the gradual decrease in material costs, Ghali believes that these supply chain challenges are short term, and that costs and sourcing times will return to a more normal level by the end of 2023.

Ghali is among the few voices that maintains a wholly positive outlook on supply chains and material costs, but this outlook is based on decades of experience. Having worked in numerous market sectors across the globe, Ghali points to historical trends that suggest the AEC

industry has faced these sorts of challenges before and risen to the occasion. Furthermore, Ghali believes that, unlike in the past, our ability to communicate is built into systems that put us in a much better position to react than ever before.

With new access to financial tools and resources as well as a tremendous pattern of growth, Hill International is poised to continue its success and reach new heights in 2023. Led by experience, Hill International has demonstrated an agility and resourcefulness that can only result in positive momentum for the markets they affect.

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**LUKE CAROTHERS** is the Editor for Civil + Structural Engineer Media. If you want us to cover your project or want to feature your own article, he can be reached at [lcarothers@zweiggroup.com](mailto:lcarothers@zweiggroup.com).



The banner features a cosmic background with a nebula and stars. On the left is a stylized logo consisting of several grey geometric shapes. The text '2023' is in a bold, sans-serif font. 'Rising Stars' is in a large, elegant serif font, and 'AEC Industry' is in a smaller, sans-serif font below it. A dark blue button with the word 'NOMINATE' in white capital letters is centered. At the bottom left are the logos for 'civil + structural ENGINEER media' and 'zweig group'. At the bottom right, the text 'NOMINATION DEADLINE: March 24, 2023' is displayed in a bold, sans-serif font.

2023  
**Rising Stars**  
AEC Industry

**NOMINATE**

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**NOMINATION DEADLINE: March 24, 2023**