

Fit for investment

23 April 2019

With the USA gearing up for a major upgrade to its infrastructure, it needs to be sure robust project management strategies are in place

The eyes of investors, both domestic and global, are trained on the [US infrastructure sector](#) . It is one of the world's most exciting markets at present, second only to China in terms of its planned spend. But there is caution too: investors want to be convinced that conditions are right for them.

In 2018, President Trump announced a \$1.5tr plan to repair and improve the nation's infrastructure, \$200bn of which would come from the federal government. [The American Society of Civil Engineers](#) thinks it should go further; in its [latest assessment](#) , it estimated that the USA needs to invest \$4.5tr between 2016 and 2025 to get its roads, bridges, water, power and communications networks up to a reasonable standard.

It is now widely understood that investing in infrastructure can provide a powerful boost to GDP, allowing individuals and companies to be more productive. In the right locations, spending on infrastructure ? particularly transport and communications ? increases social mobility and widens opportunities for underprivileged communities. However, with 80% of funding for the administration's infrastructure plan expected to come from non-federal sources, project sponsors must look to alternative sources of investment. Already, projects are being procured through public-private partnerships, as well as state and local taxes raised directly to fund them.

Whether would-be investors are local, domestic or overseas, what happens in the earliest phases of a major project is vital. The need for a robust business case at the earliest point is critical to making sure the investment decision has considered the project's strategic, economic, commercial, financial and management requirements. Get it right and you'll build confidence in the market and investors; get it wrong, and the project could flounder or fail.

Given the sheer scale of infrastructure investment ahead, the USA cannot rely solely on home-grown talent and resources. Infrastructure projects must attract consultants and suppliers from a global market, alongside local players, and provide and nurture specialist expertise where necessary. This means US infrastructure will be competing with other major projects around the world for resources. The continuing development of construction-related academic courses is therefore important. Integrating good industry practice and common worldwide standards into the curriculum will give students the tools to become high-performing practitioners.

Lessons can also be learned from other countries that have failed to attract enough students into the industry. With baby boomers now approaching retirement age, there is potential in the USA for a significant shortage of skilled resources due to the rapid growth of other sectors such as technology.

To succeed in a global market, infrastructure projects must prepare themselves from day 1. Instead of thinking project by project, owners need to develop a project management mentality, looking at the market and its suppliers strategically, putting mechanisms in place for learning lessons and improving from one project to another, and taking a proactive attitude towards risk. The 5 steps listed in the box below will help major projects get fit for investment and give confidence to the market.

Five steps to get fit for investment

1. Create a vision
2. Embrace risk
3. Devise the right structure
4. Talk to the market
5. Take a long-term view

First, long before the design process begins, it is crucial to establish a strong vision for the local and regional infrastructure programme. This should look at quantifiable benefits such as improved journey times, the boost to the local economy or cost reduction, as well as less easily measured impacts such as increased resilience, lower environmental stress and improved health and well-being. It is important to consider negative as well as positive impacts at this point too. There are many stakeholders connected to an infrastructure project, any one of which could potentially derail it or at least slow its progress.

Only when there is a clearly defined vision can the project team start to communicate what that is. Never underestimate the power of local people and communities: a well-supported vision is a far more attractive investment proposition than one surrounded by protests and negative press.

With 80% of funding for the US administration's infrastructure plan expected to come from non-federal sources, project sponsors must look to alternative sources of investment

Second, you should be ready to embrace risk. A proactive attitude to risk management, rather than a box-ticking approach that looks to minimise or transfer risk, can add value to a project and an organisation. There isn't a one-size-fits all approach to risk management. Instead, it is necessary to look at issues such as the complexity of the planned projects, the expertise and availability of contractors and suppliers, trends in materials and labour prices and, importantly, the organisation's appetite for risk, as they are ultimately accountable for all of the risk all of the time. It is also important to remember that risk management is not a one-off activity: risks and opportunities change over time.

Third, completing a programme of works, whether it is a series of new pipelines, upgrades to highways or new metro lines, requires the right structure, and should not be considered business as usual. A project exists for a defined period of time and has specific goals, and the end of the process should be planned for. This has different demands from an operational piece of infrastructure.

Trying to run a project team in the same way as its parent company is rarely effective. Teams must have some autonomy and the flexibility to make decisions, accountably and within certain limits, otherwise decision-making is bottlenecked and the project and budget will suffer. By the same token, managing projects requires a different skill set to everyday activities. An early priority should be to assess the capabilities an organisation has, what it will need over the course of a project, and how it will find the right people at the right points along the way.

Fourth, as there is no point in choosing a procurement route that only attracts a couple of bidders, you should talk to the market. Engage with suppliers early to find out what their order books look like, what their risk appetite is like and what forms of contract they find familiar. This becomes even more important in a healthy market. The best suppliers are able to choose projects that fit their risk profile and will enhance their reputation and reference list. It is worth noting that the process of engagement gets more complex when projects are looking to attract suppliers from further afield.

The fifth and final step is to take a long-term view. Procurement decisions have historically been made on the basis that the lowest bidder wins, but more mature organisations are considering the asset's whole-life cost. Can a case be made to increase capital spend to manage maintenance and operational costs more effectively over an asset's lifetime? This can be challenging, given legislative and political restrictions. However, we are seeing new forms of procurement emerging, such as progressive design and build, and public-private partnerships, that aim to harness innovative ideas from the supply chain to add more long-term value.

As organisations develop a whole-life cost for an asset, they needed to understand the relation between the available budget and the required performance of the asset. In addition to capital expenditure and operating expense costs, a robust whole-life cost model requires the inclusion of calculated asset risk cost. This is a direct output of applying and comparing the budget and performance analysis to the definition of risk, looking at the likelihood of failure versus the consequences of failure.

Those overseeing major infrastructure projects often assert that the most challenging phases came well before the contractors and their equipment arrived on site. From gaining political and public approval to navigating the burdensome regulatory environment to securing funding, the first years of a project are inevitably gruelling.

A robust approach to setting up a major infrastructure project decreases the chance that this effort will come to nothing. Ensuring the right capabilities are ready, that risks have been considered and managed and that long-term impacts have been identified will increase confidence among stakeholders. There are examples of success around the world, and major US infrastructure projects have the chance to take that best practice and make it their own.

Murray Rowden is regional managing director, Americas and global head of infrastructure at [Turner & Townsend](#)

Further information

- Related competencies include: [Leading projects, people and teams](#)
- This feature is taken from the [RICS Construction Journal](#) (April/May 2019)
- Related categories: [Project monitoring](#) , [Planning and programming](#)