B. Business Impact
Rethinking Businesses

Managing "Large Projects" through the Covid-19 crisis

ESCP Impact Paper No. 2020-34-EN

Gérard Naulleau
ESCP Business School

Nicolas Swetchine
ESCP Business School

ESCP Research Institute of Management (ERIM)

ESCP Impact Paper No. 2020-34-EN

Managing “Large Projects” through the Covid-19 crisis

Gérard Naulleau
ESCP Business School

Nicolas Swetchine*
ESCP Business School

Abstract

Large Projects are impacted by the Covid-19 health and economic crisis, with challenges in terms of project management resilience, contracting and governance fundamentals, but also opportunities for accelerating technical and business innovation. This paper outlines key topics from different angles: managerial, financial and sociological with both academic and practical insights.

Keywords: Project management, Infrastructure, PPP, Governance, Covid-19

*Adjunct professor, ESCP Business School

Managing "Large Projects" through the Covid-19 crisis

In mid-March 2020, the multi-billion-euro, 200km-long Grand Paris Express metro-rail infrastructure program is put on hold for safety reasons related to coronavirus lockdown in France. At the same time, the new Genoa bridge construction is pushing ahead in Italy, allowing an inauguration at the end of April, as a symbol of Italian resilience and hope after the Ponte Morandi collapse in 2018. And during this same month of March 2020, French teams at Vinci Construction, together with their British Joint Venture Partner Balfour Beatty, are closing the negotiation of a £5 billion contract for the HS2 UK high-speed train program for a planned start this year. On the other hand, many new airports or oil & gas projects are being put on hold worldwide.

The Large Projects that are core to the infrastructure business weighing about 4% of the world GDP are heavily impacted by the Covid-19 health and economic crisis and are taking different routes. It raises new questions in terms of project management resilience, contracting and governance fundamentals, but also appetite for potential opportunities or innovations.

Before discussing the impacts of the Covid-19 crisis on Large Projects, it is important to note that in essence Project Management is adapted to weathering crises, as managing a project is first and foremost about managing risks across a set of contingencies. Typically, a mechanistic management system with separate tasks optimized through dedicated performance processes, which is central to the industrial sector, is appropriate for stable conditions, whereas an organic form, with a continual adjustment of individual tasks in interaction with others, typically structuring Large Projects organizations, is appropriate to changing conditions such as in a crisis, which gives rise constantly to fresh problems and unforeseen requirements for actions which cannot be broken down or distributed (Burns and Stalker - 1961).

Coherently, Risk Management is core to Project Management. The basics that are performed upfront and during the lifetime of any Large Project are fully applicable, and actually being applied, to the current Covid-19 crisis: establishing the context, including defining a set of success criteria against which the consequences of identified risks can be measured, identifying the risks that may impact the project, analysing and evaluating the risks, which is basically assessing how often a given risk may occur and how seriously it might impact the project, treating the risks, which is either reducing the likelihood or consequences of important risks or developing a Risk Action Plan to be activated should preidentified risks occur, monitoring risks along the project lifetime and, last but not the least, communicating and consulting through the project lifetime with the main stakeholders (Cooper, Grey, Raymond, Walker - 2005)

Therefore, the natural reaction of all major project managers facing the Covid-19 crisis was to both update their risks analysis and activate their existing Risk Action Plans. Very quickly, specific organizational set-ups were put in place, such as Covid-19 war rooms or business resilience teams, allowing managers to centralize all essential information in one place and decide on the strategy and actions. Given the nature of the Covid-19 crisis, the Health & Safety teams have quickly become central in Large Projects management, imposing strict protective measures (e.g. distancing on construction job sites). Other typical action plans encompassed replacing suppliers who were unable to perform, strict cash management, and close monitoring of accounts receivable, etc.

However, this unique crisis is challenging many Risk Action Plans in at least three critical domains: organization, financial management and sourcing.

In terms of organization, distancing on job sites, total travel bans for project engineers, and non-physical business meetings for leaders are all typical current issues that were often not predicted in existing Risk Action Plans. How do you manage a port project in Africa when you are a Chinese contractor with your project managers stuck in China? How do you manage a tunnelling program underground with hundreds of workers in a confined space? How do you monitor the engineering progress of a new metro in Eastern Europe when your main engineering teams are sitting in home-offices around Paris? In many ways, this crisis is changing working processes: management team war rooms are happening through secured video-conferencing, the home-office is being generalized for most engineers who are working across borders with virtual tools, companies are adapting network and software capacities, health tracking systems are being implemented on construction job sites. Beyond the current crisis, it is likely that the Large Projects ecosystems are learning to work in a different way, to face the crisis today, but also possibly gaining in efficiency for the long run.

In terms of financial management, Infrastructure Projects may currently be facing critical issues related to delays, reduced productivity and cost overruns. All usually combine to put the expected project financial margin and cash-curb at risk. As the issue of a global health emergency, like a pandemic, is not considered as "Force Majeure" in most contractual agreements, project managers cannot rely on insurance to mitigate those extra financial burdens which might be heavy in terms of direct project losses or even penalties. Project managers are left with a few options, such as renegotiating schedules with sponsors and / or sharing cost overruns with contractors and suppliers along the overall project value chain.

In terms of funding for large project infrastructures, how will the current crisis affect the financing sources between public authorities and private lenders? Will future Public Private Partnerships (PPPs) allow for the kind of new innovative funding schemes which have been tested in recent years in different areas, like data monetization-based funding or cost savings-based investment models (Naulleau-2019)? There is clearly a trend in most countries to leverage infrastructure projects as a preferred option for economic recovery with record announcements in terms of the funding to be made available by public authorities and agencies. Will those huge amounts of capital be leveraged through PPPs in mature OECD economies or will some emerging mistrust for the private sector prevent public authorities from cooperating with the private sector? This is an important question as infrastructure project risks analysis may be considered to be even more thoroughly investigated in PPP schemes than in classical investment models. In Asia, for example, some massive infrastructure-based stimulus programs through direct procurement models following the 2008 crisis led to a number of irrelevant investments in "ghost infrastructures" lacking traffic or significant use by users or citizens.

In terms of sourcing, Risk Action Plans were established to find back-up suppliers and multiple sources etc. but few plans had envisioned a complete collapse of entire industrial ecosystems or such huge logistics issues with large import bans, a lack of transporters etc. Many companies are openly reviewing options in terms of stocks (e.g. PPE – Personal

Protective Equipment such as masks), supply chain localization or even internalization of outsourced supplies and services.

Beyond immediate project crisis management, the Covid-19 economic storm also affects relations among stakeholders, as we will see now.

The main direct impact is on contractual relations with few options, as we have seen above. Skills in contract management but also soft skills in relationship management are highly critical in order to negotiate revised terms, while preserving confidence for future business relations.

Beyond the contractual aspects, a Large Project, like any complex organization as described in organizational institutionalism theories, is a triptych combining a shared vision, a unique ecosystem of actors with a legitimate leadership, and a set of rules accepted by these actors. Systemic crises like Covid-19 have an impact on every dimension of such as triptych.

Visions are being challenged: for example, some are questioning whether it is useful to build new regional airports, other are discussing the long-term business implications of the China-led Belt & Road infrastructure program, many are insisting on priority being given to health and wellbeing infrastructure investment, others are debating whether the Covid-19 crisis reveals an urgent need for more sustainability in projects or, on the other hand, whether projects should be got back on track fast with fewer ecological constraints – to mention just a few on-going debates that will directly affect the visions driving large projects.

The network of actors and leadership style is also being challenged with questions already emerging, such as on the global versus local debate. Additionally, leadership is being questioned in terms of legitimacy: in the current stormy business context, cognitive legitimacy consisting in appearing to be doing what is right for society, and procedural legitimacy which consists in following established processes, expertise and norms, may appear as much stronger resources for leadership legitimacy, than the usual pragmatic source consisting in technical and managerial certainties and commitments to results, as defined by sociological studies on management legitimacy (Suchman – 1995). With such a huge crisis with long-term impacts, the I-know-what-to-do posture may provide some reassurance initially, but could be very difficult to sustain by leaders in the long run – here again, Covid-19 may lead to new best practices.

Last but not the least, governance ruling is also under some kind of stress-test. At least two specific governance topics are emerging for Large Infrastructure projects. First, crisis management often leads to centralizing information and operational decisions at Executive Committee or even Board of Directors levels, as fast prioritization is critical. As the Covid-19 crisis is likely to last for many months, the issue will be to define how long the organization should keep such short-cuts, and what the new normal governance system will be. Second, as is typical in large systemic national crises, the role of States is increasing and yet other bodies, such as NGOs or workers' unions, may have a big impact on projects as this crisis questions current economic models. Third, legal matters related to workers protection are all the more complex to handle for project managers as the protection schemes are often questioned and even modified.

Last but not the least, beyond project management resilience objectives, contractual and governance matters, the Covid-19 crisis is also triggering innovations and business transformation in an accelerated manner, in a Schumpeterian creative destruction momentum.

It is important here to note that, where Innovation is often rejected during the project execution phase, new designs or solutions are, on the contrary, a driver of the Large Project institutionalization process, where the project design and organization is crystalizing (Swetchine–2016). As we have seen above, the Covid-19 crisis is challenging Large Projects, be it in terms of vision, ecosystems or governance ruling. In a way, we might consider that many Large Projects are being challenged and re-shaped to some extent, often with new objectives, timing and even actors – opening the door for innovation.

We can already see key topics that may trigger innovation for the management of Large Projects, during and after the Covid-19: efficiency schemes, sustainable development and business agility.

Efficiency is a challenge, as the Covid-19 crisis imposes new rules for Large Projects, such as rotating shifts, staff distancing on job sites or complex logistics, that are worsening an already difficult reality, as studies show that the overall productivity of infrastructure projects has been rather flat for the past 20 years. We already see some changes. For example, the current crisis is accelerating digitization processes, typically with the generalization of digital approvals, such as e-permitting. Other typical changes relate to contracting models, typically with faster payment schemes. Actually, there is a myriad of actions being launched nowadays to boost project productivity from the award through to design and execution; all these innovative actions are likely to boost productivity for good, once the Covid-19 crisis is over.

Sustainable Development is a second boiling topic and a tough debate that we see emerging. For example, the European Commission Green Deal is seen by some as the main driver for the forthcoming EU recovery packages, or by others as a past dream to be forgotten. Beyond politics, the Covid-19 crisis is questioning our models of development: More energy production? More metros or more roads? Smart cities around IT systems or around green mobility? More airports or more rail tracks? More hospitals or more stadiums? All these questions are on the table and are likely to bring important business transformations.

Last but not the least, to weather the current fast-changing situation, business agility is even more essential now than ever before for Large Projects. First, it is about the ability of doing big business with fewer support staff and via mostly digital interactions, such as concluding a £5 billion contract overseas encompassing hundreds of engineering structures (viaducts, tunnels, interconnections, etc.). Second, it is about capturing new business opportunities, for sure around digital and cloud systems, but also in many other domains, such as urban infrastructure clean-up, medical waste treatment or advanced construction material solutions to gain time, just to name a few. Third, agility is also about business models, for example around financing schemes, with political debates to come, for example on people personal data monetization, while public bodies financing capabilities will obviously be under pressure.

Managing Large Projects through such a unique crisis as Covid-19 is a challenge. Succeeding is all the more important as infrastructure development, from metros to 5G networks, from off-shore wind farms to transport corridors, from maritime structures to military facilities, will be at the core of the forthcoming Keynesian stimulus packages around the world.

As in any crisis, there will be losers – and winners.

References

Burns and Stalker (1961). Theory of Mechanistic and Organic Systems in "The Management of Innovation", Oxford University.

Cooper D, Grey S, Raymond G, Walker P. (2005). Managing Risks in Large Projects and Complex Procurements in Project Risk Management Guidelines, John Wiley & Sons.

Naulleau G. (2019). Enabling Smart Cities through Public Private Partnerships: UNESCO Smart Cities Conference, Paris.

Suchman M. (1995). Managing legitimacy: strategic and institutional approaches in Academy of Management Review vol.20, N°3, 571-610

·Swetchine N. (2016). Un néo-marketing des grands projets in Management des Grands Projets, Collection Master ESKA.