Volume 01, Issue 01, 2023. PP. 57-70
https://doi.org/10.62078/grks.2023.v01i01.008
Research Article

GS WOW
Wisdom of Worthy Research Journal

A Strategy for Managing Global Projects: Critical Activities from Practice

Garry Blair[1], Helen Woodcock[2], Rosane Pagano

[1]Assessor, INPD, Blackthorn House, Appley Bridge, Greater Manchester, United Kingdom
[2]Associate Lecturer, Manchester Metropolitan University, Manchester, United Kingdom
[3]Principal Lecturer, Manchester Metropolitan University, Manchester, United Kingdom

ARTICLE INFO

Corresponding Author
Dr. Garry Blair

Email
drgblair@outlook.com

Article History
Received: 02 October 2023
Accepted: 28 November 2023

Orcid
https://orcid.org/0000-0003-0861-3429

Cite33
Blair, G., Woodcock, H., & Pagano, R. (2023). A Strategy for Managing Global Projects: Critical Activities from Practice *GS WOW: Wisdom of Worthy Research Journal.* 1(1), 57-70.
https://doi.org/10.5281/zenodo.10440877

ABSTRACT

This paper considers the management of global projects, focusing on good practice to deliver the specified outcomes. The requirement for good communications is highlighted. A system is needed, incorporating a method to check understanding between the project personnel, especially in respect of different nationalities. The facility to translate and filter information, as required, is mentioned. The aim is to encourage collaboration between the different parties involved in running the project. The use of a detailed plan as an integrating mechanism to coordinate the project activities across national boundaries. The delivery of the required outcomes will probably include the management of both virtual and in-person teams, possibly in different countries. This will generate challenges for the leadership of these concerns, which are noted along with sustainable practices, even at the expense of profit. A review of key journals was enacted, in order to identify important themes. An interview was conducted with a practitioner from a firm that runs international projects. The main aim was to gather knowledge of good practice for running global projects. A template for the creation of a strategy for managing such projects was compiled, identifying critical activities for effective delivery of the specified outcomes.

Keywords: *Global Project; Megaproject; Strategy; Communications System; Project Plan; Sustainable Practices; Cultural Sensitivity*

Introduction

Global projects are essential to the world economy. They are needed to construct vital infrastructure and create products to advance human development and guarantee economic growth. Many of these are megaprojects, which were classified as projects with a budget exceeding 10 billion US dollars in the construction industry. There are now several projects that exceed 100 billion US dollars in respect of their budget (Buchholz, 2023), showing the increased value of this area. A Global Project can be defined as 'a task that requires a lot of time and effort' that is 'being or having to do with a business, operation, system….carried on or extending throughout all or much of the world'

Copyright (c) 2023: Author(s). Published by Gaurishankar Campus

(Collins Dictionary, 2023) and a megaproject is 'a very large, expensive or ambitious business project' (Collins Dictionary, 2023). This is the area of research for this article.

Problem Statement

Global projects are, typically, subject to significant cost and time overruns. This leads to them being regarded as failures in terms of implementation and, sometimes, the actual products and services. This research comprises an investigation into this type of project, via a review of selected literature and an empirical study. The focus is on discerning potential good practice, in order to improve the outcomes of these enterprises.

The issue of project failure in Nepal has been a major concern due to various factors such as counterpart funds, reimbursement problems, poor monitoring and evaluation, corruption, and lack of good governance. Construction projects in Nepal have also been affected by factors such as late progress payments, lack of initial understanding of customer requirements, and failure to receive approval from authorities (Mishra et al, 2020: Chiluwal, K., & Mishra, A. K. ,2018 : Mishra, A.K., Bhandari, S., & Jha, T. ,2018: Chiluwal, K., & Mishra, A.K. ,2017: Mishra, A.K., & Singh, N.K. ,2018).

Research Objective

The aim of this article is to utilise recommended good practice to formulate a template which will help organisations to create an effective strategy for managing global projects.

Methodology

A review of selected articles was enacted from key journals. This was followed by a thematic analysis, in order to determine the critical activities for global projects. An interview with a practitioner was held and the results were also analysed into themes. The interview format was semi-structured, thus using several predetermined questions but allowing for further questions, based on the respondent's answers. This gives some flexibility to the interview. The practitioner is a leading executive of a firm that manages international projects. The data, both from the literature and the interview, was organised into themes, without a predetermined coding structure. The technique was to employ 'grounded methods' in order to generate knowledge in the research area (Easterby-Smith et al, 1991; Blair and Pagano, 2021a). The objective was to contribute to practice via the creation of a template for a strategy to manage global projects. The research results, in respect of the critical activities, were illustrated using a 'systems approach' (as per Checkland and Scholes, 1990 and utilised in Blair, Woodcock and Pagano, 2023), in order to contribute to theory in this sphere and summarise the learning in respect of this research. A framework to assist practitioners was, therefore, produced (after Blair, Pagano and Burns, 2019).

Literature Review

A review of selected journal articles was conducted. The main themes were noted using a 'grounded approach' in order to analyse the data from the literature.

Communications

The use of digital platforms to assist organisations with innovation is considered by Ferdows et al. (2022). This article discusses the role of a digital supply facility in enabling a network for collaboration and problem-solving. An example is given of a company that created a digital platform that encourages such sharing in a structure that facilitates open communications. The platform mainly addresses the supply chain but the networking aspect extends the usage. The introduction and activities of other companies are not restricted in a manner usually found in such facilities. The platform is configured to allow open communications and encourage collaboration between participating organisations. This means that these member organisations can confer to solve their own problems, perhaps independently of the host.

This displays trust in the collaborating organisations. The article suggests that this approach has led to process improvements and productivity gains for

the host and other organisations in the network. The benefits have, hence, exceeded the straightforward linking of supplier companies to deliver a service. Both product and process can be enhanced by such a collaboration. The notion of a 'digital twin' was mentioned, namely the digital modelling of a physical entity to enable design, development and maintenance improvements.

The use of such networks is vital to global projects, as a number of suppliers will probably be required to work in different countries in order to deliver the required outcomes. The facilities to promote cooperation amongst these companies in order to solve problems in international projects is essential. This type of project tends to be complex and requires creative solutions, perhaps in multiple countries via different organisations. This will probably require a more informal network with an association of organisations taking responsibility to solve the problems. The contractual arrangements are, hence, likely to be more flexible and focus on using trusted partners, rather than more traditional fixed contracts to deliver specified tasks. There should also be a vetting process for suppliers, in order to ensure suitable organisations are recruited as trusted partners. This could involve a trial period, checks on financial position and references from valid organisations.

These networks may require different personnel with a variety of skills, depending on the project tasks and their timing. The networks may need to change their partner companies, depending on tasks and location, in order to support different countries, for example. Different projects may have varied timescales and requirements, necessitating different combinations of organisations in order to successfully deliver their prescribed outcomes. The need for flexible collaborations in the form of these networks is, thus, evident.

An example of a global project is considered in respect of space travel, by Weinzierl et al. (2022). The opportunities for companies to have a 'space strategy' are addressed. The exploration of space has long been an area of international collaborations, for example both the International Space Station and the US Artemis project to land people on the moon involve international partners, in both cases NASA and the European and Japanese space agencies, for example. This article discusses the growing private sector contribution to this area, involving companies from different nations. Space is viewed as a potential area for innovation and a diverse range of products are cited. Four areas of potential growth, therefore possible international collaborations, are discussed, namely data (gathering data from Earth, for example), capabilities (using the unique properties of space such as zero gravity to develop pharmaceuticals), resources (accessing the mineral deposits there, for example) and markets (fulfilling the needs of space tourists, for instance). These are all areas for current and future projects.

The attributes that characterise successful international cooperation in this sphere, to optimise the delivery of project outcomes, are discussed. Experimentation is viewed as being vital to such projects, in order to determine innovative solutions in a novel area. The discretion to allow projects to fail quickly is seen as being important, in that viable solutions can be determined as different options are evaluated quickly, with acceptable resource costs. This contrasts with the common attitude that major projects are not allowed to fail, due to the scale of the past investment, so further funding is provided to these projects, thus increasing the final cost of any failures. The requirement for an effective team, including international partners, who work together to achieve innovative solutions to the project problems, is discussed. The team members need to have the right qualities and comprise a suitable blend of personalities and skills to complete the project.

The private sector now provides many resources for such projects, for example the Artemis program, which has many contractors including companies from different nations. This has tended to reduce the costs of such enterprises, for example satellite building and launch.

Firms that work together in such enterprises will tend to operate as collaborative partnerships,

rather than strictly adhering to contracts, in terms of their relationships (Frydlinger et al, 2019). The latter would be too constrictive to accommodate the exploratory, innovative nature of this type of project.

Learning/Planning

The importance of learning from failure is stated by Birkinshaw and Haas (2022). The problem of risk aversion and fear of failure is highlighted by this article. The requirement to encourage learning from failure and to utilise a structured approach, in order to maximise the potential benefits from analysing the scenario, is detailed. These authors suggest an inventory of failure, defining the assets and liabilities from the situation. A clear comprehension of the costs, benefits and potential benefits can, therefore, be obtained.

The problem of risk averse behaviour in organisations is noted. This potentially leads to opportunities being missed and a failure to advance the organisation in respect of the environment. This could lead to loss of market share, profits and business, in relation to competitors.

he importance of the leadership team setting the example and, thus, determining the culture was stressed. The acceptance of failure as an essential component of a focus on experimentation is needed. A 'learning audit' can be enacted to glean knowledge from any organisational failure. Projects should have a clear review mechanism and this audit can be incorporated into their ongoing process, as periodic feedback or a final analysis.

A culture that encourages experimentation and permits failure should be created, according to this literature. The organisation could make arrangements so that the potential failures are limited in terms of resources, so that the costs of failure are kept to a minimum. If scope for innovation is limited by risk-averse behaviour then the organisation could fail to develop, realise opportunities for enhancement and ultimately stagnate.

Global projects require risk-taking and innovation to succeed. The need to learn from whole or partial project failures is necessary, in respect of these complex entities, to develop organisations and networks that are capable of delivering these projects and achieving successful outcomes.

Research into infrastructure megaproject failure was enacted by Juarez Cornelio et al. (2023). These comprise large capital-intensive transport and energy projects and many global projects are similar in both purpose and scale, as well as exhibiting aspects of failure. The termination of this type of megaproject at the construction stage is a critical decision and many global projects are subject to this consideration, principally due to their complexity and scale. This article examined case studies to determine aspects of their failure. Learning can, hence, be derived from these projects, in order to assist current and future implementations. The principal areas for failure were determined.

The issue with megaprojects is that, after considerable expenditure, cancellation may not be considered as an option, due to the prospect of having no positive results for this investment. The process of termination, namely the premature end of the project without realising the specified benefits, is viewed as being subject to the impetus created by negative results and the prospect of poor outcomes.

Termination of a megaproject can, according to these authors, be caused by several factors:

1. Government intervention due to changes in policy or administration or social opposition;
2. Problems with cash flow and funding;
3. Changes in the prevailing technology or demand lead to the project delivery and objectives no longer being regarded as valid in the current environment;
4. Environmental concerns lead to the cancellation of the project, as the original basis is no longer viewed as being viable;
5. A change in regulations or failure to comply with current regulations mean the project is stopped;

External, unpredictable factors lead to cancellation, such as extreme weather and the pandemic.

This permits project personnel to discern key areas to monitor, in order to detect potential causes of failure. This could allow action to be taken to prevent this occurring or a reduction of project resources, in order to reduce potential losses on termination.

It should be noted that termination may be the most beneficial course of action, depending on the circumstances, in order to preserve resources and minimise losses.

Project Manager

The optimal management of megaprojects is considered by Flyvbjerg (2021). These are large, capital intensive, complex projects and global projects can usually be classed in this category. Megaprojects are often infrastructural and have complex IT and governance requirements. The international aspect adds a further layer of complexity to these projects, with differences of culture, language, currency, location and time zone to be considered, for example. This author cites several examples of good and inferior practice, in the form of large, mostly international projects. This article makes a number of recommendations to assist with gaining successful project outcomes.

The author suggests that these projects should utilise existing technology, as implementing innovative technology will probably lead to delays. These are likely to be caused by the learning required to employ such technologies. The use of standard, proven technology provides a more reliable basis for such higher-risk concerns. The innovative use of delivery techniques, however, could be applied in order to aid project progress. An example was given of a project utilising extra teams, more than usual in the industry, working longer hours to complete the work in a shorter timescale than comparable projects.

The need to make the project modular, if possible, was stated. This means implementing these projects in discrete, individual sections. These should be capable of operation, so that value is delivered early. This helps with credibility and possibly liquidity, as early benefits can be accrued, thus assisting the impetus of the project.

The ability to make accurate predictions is also considered, as megaprojects require the future environment to be understood, often over a considerable period, in order to make decisions regarding supply and demand. The suggestion is that one year is the maximum dependable time frame to make accurate predictions. Conditions beyond this period are, therefore, prone to inaccuracy and not reliable. This means that large global projects need to be delivered over relatively short periods, in modular fashion, so that the operating environment can be understood. The requirement to learn from each delivery is also stated. The result is that the techniques for managing the projects and, potentially, the outputs themselves, can be improved in each successive delivery.

The requirement for non-disruptive innovation is noted (by Kim and Mauborgne, 2023). These authors state that disruptive change can be problematic because it usually involves the loss of business, including jobs and even companies, due to the potential replacement of prevailing technologies, goods and services by superior innovations within existing markets. The move to streaming films is an example, causing the demise of the video rental industry.

The creation of new products and services can be innovative, creating new markets that did not previously exist, as well as disruptive, within existing markets. The new product, such as streaming films, may create new markets, for example to mobile communications devices, that creates new demand as well as disrupting existing business by replacing the video rental operations.

Non-disruptive innovation will create totally new markets with demand for the products and services that does not affect existing markets, according to this literature. This type of innovation is recommended by the authors, as there is no counterbalancing, negative effect. There are solely positive gains, in

terms of profits, employment and the social effects. The implementation of microfinance to permit low income individuals to have credit, usually in the form of loans, and also the introduction of space tourism are given as examples of non-disruptive innovation using existing technology and new technology, respectively. They have the advantage of providing pure benefits rather than the net benefits of disruptive innovation, because of the absence of the societal costs of disruption, as existing businesses are removed or reduced in terms of scale of operations.

Global projects should, if possible, be focused on non-disruptive change in order to maximise the potential gains. This category of project is usually large, complex and operating across at least one international boundary. The potential for disruptive and non-disruptive change is, therefore, high. The premise of this article is that these projects should focus on the latter to obtain maximum societal benefits.

An analysis of good practice from an expert in achieving successful outcomes for complex megaprojects is considered in Flyvbjerg and Gardner (2023). The main themes of project management techniques, as employed by this individual were reviewed, in order to learn from successful practice.

The requirement to have sufficient power in the organisation to perform the job and deliver the agreed results was stated. This is to ensure that all of the tasks that the project manager determines as being necessary are implemented to their designated standards.

The importance of understanding the rationale of the project is stressed. The need to determine the motivation for proposed work is viewed as being vital. This will provide the project manager with the context for the project and should facilitate decision-making, having a clear comprehension of its objectives.

The initial phase of the project is seen as being critical, in terms of delivery. The key activities here are simulation, iteration and testing. The repeated consideration of the initial specification and plan of work, in order to verify that it is valid from the perspective of the main stakeholders and feasible in terms of delivery is seen as being essential. The use of simulations, which could be computerised for example, is considered to be a major component of a successful project. These can be developed iteratively, so a perspective is developed then reviewed, possibly using a customer viewpoint, then the original prototype is amended, based on this feedback. The process is then repeated until all parties are satisfied, with a compromise being reached in the case of constraints.

The key is to emphasise the planning phase and take the time to ensure that all of the critical assumptions are verified, as much as possible. The premise is that corrections are much less expensive at the initial, design stage than after the commencement of the delivery phase, when resources have been committed. Extensive testing and simulation are used to establish a comprehensive plan for delivery, where assumptions have been verified as much as possible before project execution commences.

Stakeholders

The commissioning of megaprojects and subsequent escalation of costs, delays in delivery and increases in scope that characterise such entities are considered by Gil (2023). The difference in focus between considerations pre and post commissioning of the projects is addressed. This entails a variation in perspectives of value. The requirement is to demonstrate value for money and that the project objectives will be delivered on time and within budget. This will result in the project being commissioned by the main stakeholders, as the specification comprises a credible proposal that will meet their expectations both in terms of the product or service and the implementation. The international project's initiation may, thus, depend on a limited group of major stakeholders, possibly in different countries, who have the power to commission the project. The typical course of such projects then embraces additions to the scope, especially in the government sector, where funding is from the public purse. Delays

to such projects are also common, due to these scope increases and problems with resourcing and delivery. Financial issues are also prevalent, as the budget is exceeded due to these problems. The estimated cost of the project is, therefore, inflated beyond the original, agreed figure that was proposed when the project was approved. This could be viewed as being the result of incompetent project management, including poor estimating of the required resources and accompanying delivery timetables. This article, however, suggests that a change in perspective occurs, post-commissioning, that accounts for these delays and resource issues. This is a refocusing of the view of value from a few main stakeholders, in order to complete the commissioning process, to a wider group of stakeholders. This allows the benefits of the project to be maximised and potentially spread to a more distributed group. This will include stakeholders in more than one country for this type of project. The refocusing of emphasis is required in order to ensure that the project is commissioned and the maximum benefits are obtained, according this literature. The potential problem is that the project is regarded as a failure and perhaps even cancelled prior to completion, if traditional criteria are utilised in order to assess its delivery. It is argued that this rationale, the refocusing of the project, needs to be comprehended and accepted in order to gain the full benefits from the enterprise.

Environment

The literature (Shih, 2020) considers the position of supply chains, after the severe disruption of the pandemic. Global supply chains are required for many international projects, in order to ensure that the necessary materials and services are available to execute the project tasks and achieve the prescribed outcomes. These supply chains are also needed for the maintenance phase, when the project is implemented and comprises an ongoing concern. The article highlights the issues caused by global sourcing of services and commodities, in order to leverage the advantages of seeking the optimum supplier from an international perspective. This practice had severe disadvantages due to the restrictions on movement in the pandemic, leading to supply shortages. The author considers the consequences of shortening the supply chains by sourcing more locally. This may cause problems with projects and routine work, as there may be higher costs, lack of capacity and lack of expertise and sufficient labour. The solution proposed is to have a more local supplier as an additional source but to still maintain global suppliers. This will provide alternatives in the case of supply chain disruption. The need to maintain some stocks of products was also suggested. This should provide a buffer against short term interruptions to the supply chain. The provision will have additional costs, though, and contradicts the trend of 'just in time' techniques of supply. The latter comprises a 'lean' set of arrangements for minimising stocks by supplying products and services at the times and in the amounts that they are required in the value chain, thus saving on storage costs, for instance. Technological advances may also improve the supply chain performance by permitting faster, more efficient delivery.

This article notes that political issues can also disrupt global supply chains. The United Kingdom's exit from the European Union and the conflict in the Ukraine are examples, as well as political tensions between countries. The provisions outlined above should offer a level of resilience to organisations, in respect of global supply chain disruption. This will be required in order to ensure the successful delivery of outcomes for international projects.

The symbolic aspects of megaprojects are considered by Floricel and Brunet (2023).

Large, iconic projects that are international collaborations can be symbolic statements by their creators, for example buildings and bridges. The use of symbols by the project stakeholders is discussed. These can be employed to assist the project completion or appropriated by opposing groups to try to stop or delay the project. The properties of these symbols are considered and categorised by these authors, forming a process centred on the project. The symbols can be abstract, concrete, affective and cognitive. Different stakeholders

form networks associated with the project. These then express abstract symbols, such as values associated with the project, and concrete symbols, such as the imagined final form of the project. The symbols are communicated in an effort to influence others in the network. They create a representation of the project which makes an impression on the stakeholder network. The latter comprises an affective, namely emotional, influence or a cognitive, namely rational, influence. This creates symbols for the project which form an image of the project that influences the stakeholder networks. Concepts such as 'national pride' and an 'iconic building', for example, can be used to rally support for the project among the various stakeholders. These can also be used to focus opposition to the project, for example, 'waste of money' and 'ugly building'.

This article proposes a model for creating these symbols to support or oppose the project. The international aspect can make such symbolism more complex, as it will have different cultural contexts. This could also lead to different symbols depending on nationality and different images of the project. This symbolism can, hence, contribute to the success or failure of these enterprises in respect of both implementation and the final product.

The contextual factors of a megaproject are considered in a qualitative study of a company (Galvin et al, 2021). The latter runs this type of project and a selection of the staff were interviewed for this study. The critical factors of governance, trust and culture were considered and the analysis focused on the potential for opportunistic behaviour, where a firm acts in its own interests, disregarding the interests of other parties in the project. The use of 'alliance' contacts was discussed, where a collaborative approach was employed, rather than the usual transactional contract, where payment was earned for the completion of specified work and the terms are clearly defined. The problem with megaprojects is their complexity and long duration, which is especially true of global projects. This means that a more collaborative approach is preferable, as many aspects of the work cannot be initially defined. The specification of work would, hence, be unsuitable for a transactional contract. The requirement is for a partnership with other companies, promoting cooperation to solve the project problems.

Governance was viewed as being important, in that the structure of the project could facilitate a partnership approach. The managerial arrangements should be designed to encourage collaboration, including the accomplished of shared objectives, rather than partners pursuing their own interests. This could include co-location of team members from different companies as well as allocating coordination roles to individuals, in order to ensure that all of the parties work together for the common interest. This is, generally, more difficult in a global project, unless personnel are seconded to the team and relocated to the same physical workplace. The prevalence of virtual working has facilitated the composition of teams from different locations, however online socialisation will need to occur in these cases.

The use of shared culture to encourage collaboration in the project is mentioned. The culture of an organisation is defined as being formulated through formal items, such as procedures, rules and codes of conduct, and informal mechanisms, such as rituals, jargon and 'stories'. The sharing of cultural norms and values could be encouraged between the project personnel from all of the partners. This should stimulate a collective approach to the work. The essential aspect of a global project is to find these norms and values via the project work and be sensitive to other cultures.

The importance of trust between the project personnel is emphasised. This can be defined as 'calculative' trust, that is based on rational arrangements, such as a contract. This could be favoured for megaprojects, rather than 'affect-based' trust, which is focused on personal relationships and emotional ties, due the temporary nature of this type of enterprise. Trust, in terms of reliance on partners without formal arrangements, can be developed through working on long projects

and multiple projects. This will tend to reduce opportunistic behaviour, where one organisation acts wholly in its own interest, and encourage collaborative behaviour. The length of global projects should facilitate this type of trust, provided the required outcomes are obtained.

A model to assist global software development projects was proposed by Drechsler and Breth (2019). The principal potential environmental challenges were identified, namely language, time zones, geographic distance and culture. The projects would need to accommodate differences in these factors, in respect of the various countries involved in these developments. Several key elements were mentioned as requirements for the successful operation of this work. These comprised: an appropriate organisational structure; the means to transfer knowledge to the required personnel; suitable methods of communications and the encouraging of collaboration; a clear development process to form a mechanism for delivering the project outcomes. The main objective was to implement the project within the required time and budget constraints, attaining the designated standard of quality. The authors state that this model was primarily designed for projects that are run using traditional, linear methods, rather than an Agile methodology.

This article provides an holistic perspective of the environment, context and processes for this type of global project.

Findings

A semi-structured interview was held with the director of a company that runs international projects, comprising technology and services. The interview data was then organised into themes and compared with the literature, in order to provide further analysis of the research results.

Communications

The respondent stated that 'A key factor is a transparent relationship and good communications between all of the parties.' The requirement for an efficient mechanism to exchange information and satisfactory protocols to establish standards and assist meaning, is thus stated. The use of translation software, a common language and 'sense checking' to ensure understanding may be required to improve this aspect.

Learning/Planning

The need for learning to occur in the project is noted and the resultant knowledge should be retained and deployed as required, especially in the planning process. This data should be filtered in order to ensure the correct level of knowledge is disseminated to the appropriate stakeholders. This is complicated by the project spanning national boundaries, so the correct context needs to be applied, for instance in terms of language and currency. The sharing of knowledge and verification of understanding are, hence, critical activities for global projects, in terms of their progress.

The requirement for a plan with timings and defined tasks was suggested. 'You need explicit, published timeframes with clear objectives and scope.' The control of the temporal aspects of projects is essential. International projects need a high degree of coordination, so delays in one aspect can have significant negative impact on the final outcomes. The creation of an appropriate strategy is noted in the literature (Blair, Barratt and Pagano, 2021) as well as planning and change management (Blair, Barratt and Pagano, 2022).

Project Manager

The leadership aspect is addressed in the statement, 'The project manager should lead the project activities. Do not rely on a third party to perform this role.' The importance of the company taking control of the project was stressed. The responsibility for these projects is with the company, so it was viewed as being important to have direct control, even if other companies were hired to perform project tasks. Blair, Barratt and Pagano (2023) consider the leadership aspects.

Stakeholders

The issue of dealing with other stakeholders is mentioned. 'Conflicting demands characterise

these projects. Some of the parties may have other priorities.' The project manager may have to accept that other influences are exerted on the project resources and objectives by some of the stakeholders. These may be inside or outside the company. It could be necessary to employ a range of tactics, from cooperation to coercion, to ensure success. The respondent considers this in the statement, 'Relationship-building is crucial for these projects. The perspective is that of a relationship rather than a dictatorship.' The importance of collaboration to achieve successful outcomes is stressed as the preferred approach. Global projects tend to be unique and have non-standard problems to overcome. Cooperative relationships are viewed as being preferable to assist in solving such problems, using combined efforts. This approach can facilitate cooperation for future projects, by building a network of partners (as per Blair, Barratt and Pagano, 2023).

'Cultural sensitivity is critical to international projects. The project manager and team should understand the various working environments.' The international dimension is considered by the respondent. The need to respect the different cultures encompassed by the project is highlighted. This could include holidays, attitudes towards work and practices, for instance. It is important to accommodate cultural variations, in order to avoid alienating these personnel (Galvin et al., 2021).

'Timings of meetings should accommodate the requirement to have the staff in the production facility.' The respondent commented on having meetings with production staff that were scheduled to reduce their absence from production activities to a minimum. This meant that the operational activities should not be neglected while project work is being enacted.

'The practice is to work online after the pandemic. The ability to accommodate online and hybrid working is a requirement of managing such projects.' The different modes of working post pandemic are noted. The project leaders will need to be proficient in managing project staff both online and in person. Teams may, therefore, have co-located staff as well those collaborating virtually. Membership of these teams could also be flexible, depending on the specific tasks or different phases of the project (Blair and Pagano, 2020). Training in a virtual environment is also covered in the literature (Blair and Pagano, 2021c).

The requirement for the project to access appropriate technologies is mentioned. These are required for communications, including translation, knowledge retention and dissemination, collaboration via virtual teams, for instance. Training is important, as stated previously, as well as standards applied to the global teams. National variations should be accommodated, such as in respect of currency, language and culture, as these affect the technology being utilised. Specific technologies may be needed for the delivery of the global project objectives. These are addressed in Blair, Grant and Woodcock (2020), Blair, Morris and Pagano (2023) and Blair and Pagano (2023), covering technology life cycle, implementation and management.

Environment

The specific national characteristics are mentioned, 'It is important to understand the geographical restrictions, of time, legal framework and currency. The language used should be plain, non-technical for general communications.' The specific issues for a global project are thus detailed. Distance can affect supply chains, service delivery and communications, for example. Different legal systems can cause issues with the applicability of contracts (Blair, Woodcock and Pagano, 2022 on contracts). Exchange rate variations can lead to profits being reduced, for instance.

The problem of misinterpretation was also mentioned. It is important to verify understanding by checking with the project personnel.

There should be an appraisal of the risks inherent in the project and its environment. This will be a considerable task, given the typical characteristics of global projects. A comprehensive assessment of the degree of risk, mitigation and contingency measures should be enacted, considering the potential gains from the project. This should be

an ongoing process and form part of the project structure (Blair, Woodcock and Pagano, 2021). A risk management system could, thus, be created to perform these functions and ensure business continuity across the global project.

The requirement to consider the environmental aspects of projects is stated. 'International projects will need to consider climate change in the future. Requirements will be more mandatory in respect of protecting the environment and adopting more sustainable practices. This may mean moving away from profit if there is a negative impact on the environment.' This suggests that companies will not only have to accommodate increased regulation in this sphere but may also choose options that do not maximise profit in favour of those that give greater emphasis to protecting the environment and promoting sustainability.

This represents a major shift in emphasis for organisations that are primarily focused on commercial activities. It is perhaps an indicator of a new rationale in this sector (Blair and Pagano, 2021b).

Discussion

The research was used to create a template for a strategy to manage global projects. This comprises the critical activities, derived from practice and the literature review. These can be utilised as a general guideline for practitioners (see Diagram 1 below), in order to assist with delivering the required outcomes from the project.

a) Setup a knowledge system to capture and retain knowledge throughout the project. This may utilise several languages and translations. Encourage learning at all levels within the project organisation and partners. The system should validate the knowledge, be secure and permit dissemination to stakeholders at the different levels.

b) Establish good communications, which should allow information to be filtered and delivered securely to the appropriate personnel. This information should be tailored to the stakeholders, in terms of both content and style. This system should include the supply chains for these projects. These should be accessed for information and innovation.

c) Create a facility to translate information and verify understanding, to be incorporated into the communications system of the global project.

d) Create a detailed project plan with tasks, timings and budgets to be utilised at the appropriate levels by the different work teams in the organisation.

e) Develop and maintain a risk management system to record, assess and respond to risks across the global project. The risks should be identified and assigned personnel to manage them, as deemed appropriate.

f) Develop an understanding of national characteristics and apply 'cultural sensitivity' to decisions and workplace discussions. Use training to achieve this objective.

g) Manage both online and in-person team members. Collaboration should be encouraged in order to improve team cohesion and project outcomes.

h) Install and maintain the required technologies, accommodating national variations.

i) Adopt sustainable practices, prioritising these over profits, as appropriate.

j) The project manager should be appointed from the main organisation, in order to retain control and ensure an appropriately qualified individual occupies this role.

Diagram 1. Template for Creating a Strategy to Manage Global Projects

This can also be considered in terms of the systems needed for these projects. The principal systems, indicated by this research, are shown (see Diagram 2 below), utilising a 'systems approach' to illustrate the transformation required to deliver a global project.

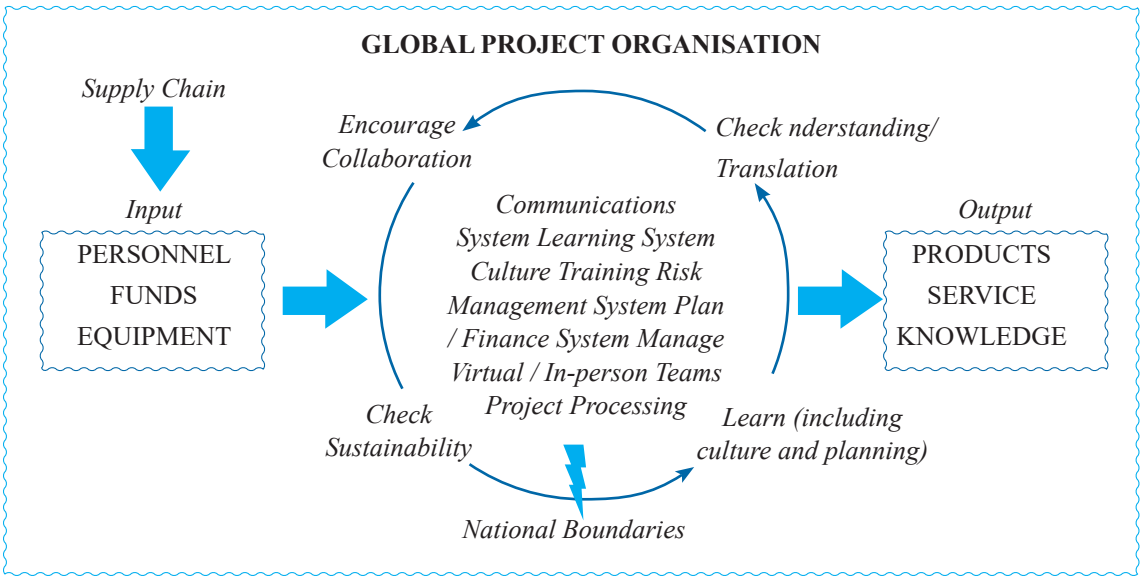

Diagram 2. Key Activities in a Global Project

The project manager, appointed from within the organisation, will setup and control the project systems, as necessary, employing the required technologies.

The principal activities in the project are considered. Collaboration between the project personnel should be encouraged. Checks should be made on understanding, considering the requisite translations. Learning should be promoted and applied to the project planning phases. Learning should also occur in respect of the different cultures present in the project. This needs to be utilised in the project decision-making processes. The sustainability of the project processes and outputs needs to be checked and adjustments made, as necessary. The actual project process must be considered, namely translating the inputs into the project objectives with one of the outputs being the learning derived from this process.

Conclusion

The research on global project management has provided valuable insights through a combination of literature review and empirical study. The recommendations derived from this work offer a strategic approach to managing such projects. To further enhance the impact of this research, it is suggested to consider projects in different sectors and countries, and involve a diverse range of practitioners at various organizational levels. Global project management is a critical aspect of business expansion, especially in the context of managing dispersed teams and overcoming challenges related to culture, language, and time zones.

By adopting the right strategies and project management practices, organizations can navigate the unique challenges associated with global projects and improve their success rate. The construction industry, in particular, has been significantly affected by issues of time and cost overruns, emphasizing the importance of effective project management in this domain.

Therefore, the findings and recommendations of the research hold significant relevance for improving the outcomes of global projects across various industries and sectors.

Acknowledgments

The authors gratefully acknowledge the Gaurishankar College, Nepal, for the excellent opportunity to present this research in a journal. The authors also gratefully acknowledge the support of editorial in publishing this work.

References

Birkinshaw, J., & Haas, M. (2022). Increase your return on failure. *Harvard Business Review Special Issue*. Summer: 18-23

Blair G, Woodcock H, Pagano R. (2022). To Outsource or Not to Outsource: Resource Decision-Making in the Project Management Environment. *Journal of Advanced Research in Alternative Energy, Environment and Ecology*, 9(3&4): 10-20.

Blair G., Morris M., & Pagano R., (2023). Critical Success Factors for Technology Management in the Post Pandemic World. *JUEM,* 1(1), 115-126.

Blair, G. & Pagano, R. (2023). Strategies for Managing Technological Change: Insights from Practitioners. *ProD Journal*, 1(1), 94-102.

Blair, G. and Pagano, R. (2021c) Virtual cells for collaborative and experiential learning in distance education, *LTSE 2021 Conference Proceedings*. *Virtual*, 29 June: 23-26

Blair, G., & Pagano, R. (2020). Leadership and Context to Create the New Technological Society. *Journal of Innovative Research in Education & Management*, 4(1), 6-9. http://ijirem.com/wp-content/uploads/2020/07/ICEM-2020-Dr.-Garry.pdf

Blair, G., & Pagano, R. (2021a). A Guide for Researchers to Negotiate the Research Process.. *Journal of Innovative Research in Education & Management*, 4(3), 1-5. http://ijirem.com/

Blair, G., & Pagano, R. (2021b). Technology and the Environment - a Framework for a Symbiotic Relationship. *Journal of Advanced Research in Alternative Energy, Environment and Ecology*, 08(02), 4-8.

Blair, G., Barratt, S. & Pagano, R. (2022). 'Serving the public in the post pandemic world': A Study of Project Management in the Public Sector. *Journal of Advanced Research in Alternative Energy, Environment and Ecology*, 09(1&2): 11-18

Blair, G., Barratt, S., & Pagano, R. (2021). Strategic Choices for the Post Pandemic Playbook. The Journal of Innovative Research In Social Sciences & Humanities, 4(3), 15-20. http://ijirhsc.com/

Blair, G., Barratt, S., & Pagano, R., (2023). Strategies for Agile Leadership in a Challenging Environment. GS Spark: *Journal of Applied Academic Discourse*. 1(1), 55-66.

Blair, G., Grant, V., & Woodcock, H. (2020). Managing the Technology Life Cycle - a Contextual Approach to Analysis. Journal of Advanced Research In Engineering & Technology, 04(01), 1-5. http://sijiret.com/

Blair, G., Pagano, R., & Burns, B. (2019). Contingency Framework for Addressing Failure in Information Systems. *Journal of Innovative Research in IT & Computer Science*, 03(02), 1-4.

Blair, G., Woodcock, H. & Pagano, R. (2021). Risk Management in the Post Pandemic Business Environment. *Journal of Advanced Research in Alternative Energy, Environment and Ecology*, 08(3&4): 15-21.

Blair, G., Woodcock, H., & Pagano, R. (2023). Skills Development in a Volatile Environment: A Systems View of the Learning Process. *Apex Journal of Business and Management (AJBM)*. 1(1), 21-32.

Buchholz, K. (2023), 'The World's Megaprojects', Statista. [Online] [Accessed on 4 November 2023]. https://www.statista.com/chart/29653/megaprojects/

Checkland, P. and Scholes, J. (1990), *Soft Systems Methodology in Action*. Chichester: Wiley

Chiluwal, K., & Mishra, A. K. (2018). Impact of performance on profitability of small hydropower projects in Nepal. *International Journal of Current Research*, 10(01), 63918-63925.

Chiluwal, K., & Mishra, A.K. (2017). Construction practice of small hydropower projects in Nepal. *International Journal of Creative Research Thoughts*, 5(4), 1417-1433.

Collins Dictionary. (2023) Collins Online Dictionary. Collins. [Online] [Accessed on 4 November 2023]. https://www.collinsdictionary.com/

Drechsler, A. and Breth, S. (2019), "How to go global: a transformative process model for the transition towards globally distributed software development projects", *International Journal of Project Management*, 37: 941-955

Easterby-Smith, M., Thorpe, R. and Lowe, A. (1991), *Management Research: An Introduction*. London: Sage

Ferdows, K., Lee, H. L., & Zhao, X. (2022). How to Turn a Supply Chain Platform into an Innovation Engine. Lessons from Haier. *Harvard Business Review* 100 (4), July-August: 126-133.

Floricel, S., & Brunet, M. (2023). Grandstanding? The elusive process of shaping megaproject symbolism. *International Journal of Project Management*, 41(5), 102498: 1-14. https://doi.org/10.1016/j.ijproman.2023.102498

Flyvbjerg, B. (2021). Make Megaprojects More Modular: Repeatable design and quick iterations can reduce costs and risks and get to revenues faster. *Harvard Business Review*, 99 (6), November-December: 50-56

Flyvbjerg, B., & Gardner, D. (2023). How FRANK GEHRY Delivers On Time and On Budget. *Harvard Business Review*, 101 (1), January-February:128-137

Frydlinger, D., Hart, O. and Vitasec, K. (2019), "A New Approach to Contracts: how to build better long-term strategic partnerships", *Harvard Business Review*, 97 (5) September-October: 116–129

Galvin, P., Tywoniak, S., & Sutherland, J. (2021). Collaboration and opportunism in megaproject alliance contracts: The interplay between governance, trust and culture. *International Journal of Project Management*, 39(4): 394–405. https://doi.org/10.1016/j.ijproman.2021.02.007

Gil, N. A. (2023). Cracking the megaproject puzzle: A stakeholder perspective? *International Journal of Project Management*, 41(3), 102455: 1-6. https://doi.org/10.1016/j.ijproman.2023.102455

Juarez Cornelio, J. R., Sainati, T., & Locatelli, G. (2023). Digging in the megaproject's graveyard: Why do megaprojects die, and how to check their health? *International Journal of Project Management*, 41(6), 102501: 1-16. https://doi.org/10.1016/j.ijproman.2023.102501

Kim, W. C., & Mauborgne, R. (2023). Innovation Doesn't Have to Be Disruptive. *Harvard Business Review* 101 (3), May-June: 72–81.

Mishra, A.K., & Singh, N.K. (2018). A Review on Time and Cost Issues of Infrastructure Projects. *Journal of Advanced Research in Construction and Urban Architecture*, 3(1-2), 32-46. https://doi.org/10.24321/2456.9925.201801.4.

Mishra, A.K., Bhandari, S., & Jha, T. (2018). Factors Affecting Performance and Time Extension of ongoing Construction Projects under Town Development Fund, Nepal. J*ournal of Advanced Research in Construction and Urban Architecture*, 3(4), 7-25.https://doi.org/10.24321/2456.9925.201805

Mishra, A.K., Sudarsan, J.S. & Nithiyanantham, S. (2020). Assessment of time–cost model of public health buildings in Nepal. *Asian Journal of Civil Engineering*. https://doi.org/10.1007/s42107-020-00294-4.

Shih, W. C. (2020). Global Supply Chains in a Post-Pandemic World: Companies need to make their networks more resilient; Here's how. *Harvard Business Review*, 98 (5) September-October: 82-89

Weinzierl, M., Choudhury, P., Khanna, T., MacCormack, A., & Rosseau, B. (2022). Your Company Needs Space Strategy. Now. *Harvard Business Review*, 100 (6) November-December: 80-91