

# How Can Collaborative Work and Collaborative Systems Drive Operational Excellence in Project Management?

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## Abstract

**Background:** Organizations' and businesses' ways of operation have drastically changed during the Covid-19 pandemic. The whole world's way of working shifted in which the physical workspaces have been replaced with virtual ones in the comfort of the home which led to the introduction and innovation of techniques that makes work and collaborative works and systems run easier. These innovations and systems which utilize technology were introduced to drive operational excellence in order to create an environment that ensures stakeholders' satisfaction, which is a vital part of Project management. Operational Excellence considers different aspects of project management which include; leadership, cooperation, continuous improvement to meet client's expectations, and a broader vision. The system of operational excellence optimizes production processes, high potency, and client and market orientation. Operational Excellence is considered an important part of the success of a business as it outlines the systematic management to realize outstanding performance. Collaboration solutions and work environments have become a crucial part in order to maximize the use and innovation of techniques that protects communities, employees, and clients. Each of the new techniques had challenges since this was not like any other kind of pandemic and new risks were emerging all the time. **Purpose:** The study investigates the applicability of collaborative environments and how organizations establish their regulatory policies to ensure effective adoption of the tool and generate operational excellence and stakeholder satisfaction. **Methods:** The study methodology that has been used for this research is a qualitative and quantitative analysis, surveys, and interviews. **Results:** Participants saw a clear value in collaborative environments and systems that drive operational excellence. However, others had a different opinion on why many organizations fail to introduce a collaborative environment within their internal and external processes.

**Conclusion:** Collaborative solutions in regard to stakeholder management and operational excellence oppose a unique challenge in the matter of integrating them during the pandemic even though they generate great opportunities. An organization should invest in a collaborative environment and operational excellence while developing a robust and reliable system that can uphold its processes which will result in operations that are run more smoothly, increased productivity, and reaching the organizations' objectives.

### **Keywords**

Collaborative Systems, Collaborative Work, Operational Excellence, Project Management

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## **1. Introduction**

With the sudden interference and widespread of Covid-19 the world has shifted and revolved around the way organizations run and operate. According to Forbes (Hatfield, 2021), organizations build up facilities to encourage employees to work in an office while still complying with safety regulations and work progress. However, this change from physical work offices to virtual work offices has exhilarated organizations to rethink and redesign their working environment, introducing more techniques and processes around collaborative work and collaborative systems.

The revolution of March 2020 became a relevant example of organizations committing and rebuilding their trust in their employees and empowering them to communicate internally and externally, collaborate and utilize technology to drive operational excellence. Building an excellent collaborative work system and environment is key to best practice, ensuring stakeholder satisfaction and driving the organization towards distinction.

This paper will study the likelihood of successful project delivery, and operational excellence of the United Arab Emirates government and semi-government entities through their journey of remote collaboration communication, collaborative work, and systems that ensured their competitive advantage and stakeholders' trust. The United Arab Emirates showcased and proved to be one of the more resilient countries towards the pandemic, its ability to mitigate the effects of Covid-19, adopt and launch multiple projects efficaciously through utilizing collaborative environments in the professional sector. The purpose of the research is to investigate the applicability of collaborative work environments and how organizations establish their regulatory policies to ensure effective adoption of techniques and generate operational excellence and the highest stakeholder satisfaction.

## **2. Literature Review**

### **2.1. Stakeholder Management and Risks for Project Success**

Stakeholder management (SM) is a vital part of the project management process.

Therein, the elements of empowerment, commitment, and organizational culture need to be assessed to achieve a holistic grip on the details connected with the various paradigms, including risk management (RM) (Xia et al., 2018). The area of stakeholder management requires enabling the stakeholders to identify, negotiate for, and achieve the objectives set through active participation (Brammer & Millington, 2004). To this end, the empowerment of the stakeholders would be required. Traditionally stakeholder management and risk management have been an under-researched area, thus providing limited importance to risk-stakeholder management. It can be considered that both RM and SM consist of a process domain and an outcome domain. The effectiveness of the management depends on how the two parts are handled in an integrated fashion. The integrated management approach enables for more efficient deployment of resources, mitigation of objective conflicts improves mutual management effectiveness, and provides new perspectives on the managerial processes (Rebelo et al., 2016).

Through the provision of risk decision-making, assessment and risk analysis lie at the core of the RM process, which will require judgment calls on the magnitude and the likelihood of the emergence of those risks (Aven, 2016). On the other hand, stakeholders can be defined as “any group or individual who can affect or is affected by the achievement of the organization’s objectives (Freeman, 1984)”. Regarding how narrow or broad should be the concerned perspective of the management regarding stakeholders, the narrow view contends that management can only consider and deal with a limited range of stakeholders due to resource limitations (Clarkson, 1995). However, as agreed by other studies, a broad definition better suits domain like construction projects due to the diverse nature of the social and economic influences, the large number of stakeholders, and the adverse consequences of excluding certain stakeholder groups for reasons of efficient use of resources (Oppong et al., 2017).

A stakeholder’s position towards a project may vary from being supportive to being an opponent (McElroy & Mills, 2000). Along with the diversity of the stakeholders, there are competing interests and concerns which have to be addressed by SM to modify those conflicts and win support from various members (Bourne & Walker, 2005). The SM process in project management involves thus collecting stakeholder-related documents and undertaking SM planning, their identification and classification according to degrees of influence and interest, developing strategies for effective management of relationships in addition to that, and through executing and controlling the various SM strategies (Mok et al., 2015).

As projects are threatened by a range of risks from external and internal environments, the phenomenon exists at all stages of the life cycle and is in a state of instability. Traditionally, risk management in projects is a reactive measure and is related to the treatment of individual stages where the goal of the management is to minimize the losses arising due to such crises (Ristvej et al., 2013). However, a

more effective model takes a collaborative approach, and the interests of the connected stakeholders are taken in from timely communication and execution. To manage the projects effectively, this would require a continuous process of risk management (Osipova & Eriksson, 2011).

## 2.2. Importance of Operational Excellence in Organizations

Operational excellence as way as we tend to might notice, the scientific literature on operational excellence is somewhat scarce. Therefore the topic has been primarily mentioned inside the context of business excellence (Lu et al., 2011). The foremost well-known and globally accepted model wont to support the implementation of operational excellence programs is the Shingo Model. Most of the different famous models, who admire the already mentioned EFQM Excellence Award or the models behind the MBNQA or the Deming Prize, have a broader perspective over business excellence and think about, however, don't seem to be centered on operational excellence. Consistent with the Shingo Institute (2014), the Shingo Model isn't a different improvement program; however, a collection of "guiding principles" that support the organization's daily initiatives in filling out gaps is associated with the following a very constant evolution within the scope of organizational excellence.

As such, the main focus of the Shingo Model is not to realize specific results but to boost the organizational systems and culture so as to higher achieve and improve them in the future. A fundamental issue that must be thought of by firms whereas implementing an operational excellence program is a way to sustain such a program, in the concert of the 1498 A.M. Carvalho et al. reasons why a significant range of quality improvement programs fail is as a result of firms place loads of effort within the implementation section however neglect its property in the long term. As explicit by Bertels and Buthmann (2013), the organization's strategy ought to think about the continual pursuit of excellence so that companies will keep glorious over time. For that purpose, a series of conditions should be observed: 1) senior leadership must be united in driving excellence, 2) the organization, during a holistic perspective, must be committed and engaged, 3) the organization strategy must be clear, outlined and communicated, 4) the organization must have method improvement in progress activities in conjunction with self-assessment, and 5) the employment of knowledge and data analysis should be a daily observation of the organization (Brown, 2013).

Consistent with Naftanaila and Cioana (2013), operational excellence could be a philosophy at the operational level with robust implications at a strategic level. Operational excellence considers the philosophy of leadership, cooperation, and drawback resolution leading to continuous improvement throughout the organizations that specialize in client needs, worker direction, and process optimizations (Liker, 2004). Operational excellence is supported by working practices that target the right 1<sup>st</sup> time—optimization of production processes, high potency, and client and market orientation (Lu et al., 2011). Jaeger et al. (2014) estab-

lish leadership, culture, strategy, organization, and cooperation at the operational level as excellence enablers that will lead the organization to semipermanent operational success. Supported the Chevron Operational Excellence Management System perspective (Chevron Corporation, 2010), operational excellence factors are supported consistent with five dimensions—method safety, environment, personal safety and health, dependableness, and efficiency.

To Chevron, operational excellence could be an essential driver for business success and a crucial part of the enterprise strategy and is outlined because of the systematic management of those dimensions to realize excellent performance. ANother|for an additional|for one more} practical perspective, the Opex Groep (2011) outlined a collection of ‘OpEx Building Blocks’ that ought to be ‘worked’ in an operational excellence program implementation, specifically leadership, product, process, manpower, organization behavior. Theodore and Anderson (2010) knew four essential success factors to pursue operational excellence. Consistent with the authors, 1) the organization’s vision should replicate the specified future state of the organization, 2) the individuals should be engaged in accomplishing the work of the organization, 3) the processes performance should operate to fulfill the stakeholders’ needs and 4) the technology is that the enabler that permits people to accomplish systematic processes expeditiously and effectively.

Literature shows that the pursuit of operational excellence is grounded on the existence of “catalysts” (enablers) that, if aligned with the organization’s culture, contribute to a sure-fire organizational excellence program or initiative. Several of those enablers are deeply captivated with human and collective factors, demonstrating that the pursuit of property excellence programs should think about the social aspect of an organization. It’s solely by doing so that the robust potential of an operational excellence program is achieved. It’ll offer the mandatory framework for changes to occur and for or organizations to match their stakeholder’s needs and come through improved excellence performance (Dobni et al., 2000; Chodkowski, 1999). In firms with significant completely different backgrounds at the structural, geographical and cultural level (Boulter et al., 2013).

However, and despite considering the incontestable competitive benefits of different quality approaches, admire ISO 9000 series of standards, once that, several companies still don’t choose the pursuit of other, a lot of mature models of quality management or excellencThis is often because of many kinds of constraints, however among the foremost common are those connected with organizational culture (Araújo & Sampaio, 2014), showing once more however crucial it’s to know and develop the cultural paradigm of an organization within the scope of the implementation and development of excellence programs and initiatives.

### 2.3. Purpose of the Study

After 2020, it became relevant that collaboration solutions and work environ-

ments have become a crucial element of maximum enterprise continuity techniques to protect communities, employees, and clients from the Covid-19 virus.

Although integrating those solutions is less complicated than ever, the sprawling nature of the tools and technique poses a unique challenge and may instigate new risks. A collaborative environment inherently conveys all stakeholders and their information together, inviting risks such as security, data, network, govt, and human assets teams.

In this experiment, the study investigates the applicability of collaborative environments and how organizations establish their regulatory policies to ensure effective adoption of the tool and generate operational excellence and stakeholder satisfaction.

### **3. Methodology**

The study approach utilized in this research is a qualitative and quantitative analysis, a combination of surveys and interviews. The questionnaire is based on the literature review and preliminary interviews with specialists and experts from different organizations from a variety of industries to highlight the issues and challenges that have emerged during the pandemic. The specialist and experts interviewed for this research were recruited based on their expertise and reputation. Through this data collection method, there will be a wide variety of information which will allow for easy comparison and data analysis. The questionnaire will be structured to ask the respondent to answer questions related to previous collaborative projects and ongoing ones that have different parties involved in them. Respondents will be asked about collaborative work, the advent, ages and drawbacks, their experience in the past/present with it. In the questionnaire, we will be asking about stakeholders' management and risks in the project along with questions related to operational excellence.

### **4. Results and Discussion**

In this section, the paper presents the results of both the qualitative and quantitative analysis. The case study was done through our questionnaire and analyzed to showcase how organizations' integration of collaborative work affects stakeholder communication and operational excellence. The population pulled for the survey was widespread through different sectors government and semi-government entities to understand and engage multiple points of view. After the results, there is a discussion followed to understand and justify the reasons behind the answers. The survey involved 12 questions consisting of multiple choice and short, answer open-ended questions. Here are the findings.

The Survey Results are based on individuals working from the following organizations: Sharjah Civil Defense, Aramex, RAK Bank, Dubai Culture and art authorities, and SEHA.

The firms fall under Government, Logistics, Banking, Art and culture, and Health care.

100% of the participants saw a clear value of collaborative environment and systems that drive for operational excellence. These organizations selected in this study is among the pioneers in the adoption and implementation of technology solutions including collaborative systems to enrich collaborative work as a pillar to drive operational excellence.

Some of the opinions of why many organizations fail to introduce a collaborative environment within their internal and external processes are:

- 1) Bad Communication.
- 2) No synergy between departments.
- 3) Competency within teams.
- 4) Lack of initiatives with other firms.
- 5) Lack of environmental systems.
- 6) Lack of flexibility.

Moreover, 100% of the participants saw that their organization's leadership is committed to operational excellence. And employees in the organization are satisfied. This is apparent in the annual survey of employees' happiness, as one of the participants mentioned. Also, one suggested that the employees are motivated because they feel like they are a part of its success.

Regarding COVID time, we wanted to know how heavily the shift to a virtual collaborative environment affected your day-to-day operation. 20% of the participants saw that their work didn't get affected at all. While the others disagreed, the rest of the participants noticed that it affected their operations but got over that quickly with technology. And some miss the face-to-face meeting, seeing that it is a regular part of their work.

After that, the surveyors were asked what do the teams and customers think of this shift to a virtual collaborative environment and systems introduced. Nearly all thought it was helpful and safer. Some thought at the beginning it was inconvenient but get used to it rapidly.

They were moving after that to essential aspects in the digital environment, which is in the case of virtual malfunctions and what measures are in place to solve them. Different organizations have different protocols in the case of malfunction. Some require the employee to come to the office, while others have backup methods to deal with any malfunctions like choosing different applications.

Then, the participants were asked Prior to COVID what processes have been used in the past to respond to external pressures and if they were effective, and if they should be improved?

One of the participants answered: the technology was used before COVID, so my organization did not change into significant changes to respond to external pressures. As for online work, the system was ready in the case for any pandemic before it happens as a result of risk analysis to ensure business continuity.

In these different organizations, changes to processes are reviewed somewhat differently, also, in the way it is implemented and communicated throughout the organization. Some use SWOT and risk analysis, and then during the change, we

use a form (Change management) ADKAR Model.

Others process from the higher management to managers then to employees. Sometimes it is through a clear and concise email from the higher management.

Furthermore, 100% of the participant's organizations invested in optimizing their operations in terms of maintaining a collaborative environment. Finally, all participants agreed that introducing a cooperative climate and systems can come with many risks—whether in terms of the smoothness of the operations or some sort of miscommunication.

## 5. Conclusion and Recommendations

In conclusion, it is not the best solution for organizations to integrate collaborative solutions to their stakeholder management and operational excellence. With the pandemic, it has been proven that the applicability of collaborative environments generates opportunities; however, it also opposes a unique challenge.

It is recommended that organizations invest in these environments and develop a robust and reliable system that can uphold its processes. Such investment will benefit the organization's productivity and help run operations more smoothly, increasing productivity and reaching the organization's objectives.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- Araújo, M., & Sampaio, P. (2014). The Path to the Excellence of the Portuguese Organizations Recognized by the EFQM Model. *Total Quality Management and Business Excellence*, 25, 427-438. <https://doi.org/10.1080/14783363.2013.850810>
- Aven, T. (2016). Risk Assessment and Risk Management: Review of Recent Advances on Their Foundation. *European Journal of Operational Research*, 253, 1-13. <https://doi.org/10.1016/j.ejor.2015.12.023>
- Bertels, T., & Buthmann, A. (2013). Raise the Bar. *Quality Progress*, 46, 28-32.
- Boulter, L., Bendell, T., & Dahlgaard, J. (2013). Total Quality beyond North America: A Comparative Analysis of the Performance of European Excellence Award Winners. *International Journal of Operations & Production Management*, 33, 197-215. <https://doi.org/10.1108/01443571311295635>
- Bourne, L., & Walker, D. H. (2005). Visualizing and Mapping Stakeholder Influence. *Management Decision*, 43, 649-660. <https://doi.org/10.1108/00251740510597680>
- Brammer, S., & Millington, A. (2004). The Development of Corporate Charitable Contributions in the UK: A Stakeholder Analysis. *Journal of Management Studies*, 41, 1411-1434. <https://doi.org/10.1111/j.1467-6486.2004.00480.x>
- Brown, A. (2013). Managing Challenges in Sustaining Business Excellence. *International Journal of Quality and Reliability Management*, 30, 461-475. <https://doi.org/10.1108/02656711311308420>
- Chevron Corporation (2010). *Operational Excellence Management System—An Overview of the OEMs*. Chevron Corporation.



- Chodkowski, M. (1999). *Relationships between Leader Characteristics, Planned Change and Organizational Culture in a Dynamic Manufacturing Environment*. Dr. Dissertations, Western Michigan University.  
<https://scholarworks.wmich.edu/dissertations/1498>
- Clarkson, M. E. (1995). A Stakeholder Framework for Analyzing and Evaluating Corporate Social Performance. *Academy of Management*, 20, 92-117.  
<https://doi.org/10.2307/258888>
- Dobni, D., Ritchie, J. B., & Zerbe, W. (2000). Organizational Values: The Inside View of Service Productivity. *Journal of Business Research*, 47, 91-107.  
[https://doi.org/10.1016/S0148-2963\(98\)00058-7](https://doi.org/10.1016/S0148-2963(98)00058-7)
- Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Cambridge University Press.
- Hatfield, S. (2021). *Deloitte BrandVoice: If We Rebuild, Will They Come Back?* Forbes.  
<https://www.forbes.com/sites/deloitte/2021/03/09/if-we-rebuild-will-they-come-back/?sh=36f16e09d880>
- Jaeger, A., Matyas, K., & Sihm, W. (2014). Development of an Assessment Framework for Operations Excellence (OsE), Based on the Paradigm Change in Operational Excellence (OE). *Procedia CIRP*, 17, 2014, 487-492.  
<https://doi.org/10.1016/j.procir.2014.01.062>  
<https://www.sciencedirect.com/science/article/pii/S2212827114003011>
- Liker, J. (2004). *The Toyota Way: 14 Management Principles from the World's Most Significant Manufacturer*. McGraw-Hill.
- Lu, D., Betts, A., & Croom, S. (2011). Re-Investigating Business Excellence: Values, Measures, and a Framework. *Total Quality Management and Business Excellence*, 22, 1263-1276.  
<https://doi.org/10.1080/14783363.2011.631336>
- McElroy, B., & Mills, C. (2000). *Managing Stakeholders-Gower Handbook of Project Management*. Gower Publishing Limited.
- Mok, K. Y., Shen, G. Q., & Yang, J. (2015). Stakeholder Management Studies in Mega Construction Projects: A Review and Future Directions. *International Journal of Project Management*, 33, 446-457. <https://doi.org/10.1016/j.ijproman.2014.08.007>
- Naftanaila, I. R., & Cioana, G. (2013). Operational Excellence—A Key to World-Class Business Performance. *Studies in Business and Economics*, 8, 133-140.
- Opex Groep (2011). *OPEXpro*. Operational Excellence 3.0.  
<https://www.opexpro.nl/operational-excellence-3-0/>
- Opping, G. D., Chan, A. P., & Dansoh, A. (2017). A Review of Stakeholder Management Performance Attributes in Construction Projects. *International Journal of Project Management*, 35, 1037-1051. <https://doi.org/10.1016/j.ijproman.2017.04.015>
- Osipova, E., & Eriksson, P. E. (2011). How Procurement Options Influence Risk Management in Construction Projects. *Construction Management and Economics*, 29, 1149-1158.  
<https://doi.org/10.1080/01446193.2011.639379>
- Rebelo, M. F., Santos, G., & Silva, R. (2016). Integration of Management Systems: Towards a Sustained Success and Development of the Organization. *Journal of Cleaner Production*, 127, 96-111. <https://doi.org/10.1016/j.jclepro.2016.04.011>
- Ristvej, J., Zagorecki, A., Holla, K., Simak, L., & Titko, M. (2013). Modelling, Simulation and Information Systems as a Tool to Support Decision Making Process in Crisis Management. *27th Annual European Simulation and Modelling Conference*, Lancaster, 23-25 October 2013.
- Shingo Institute (2014). *Shingo Institute—Shingo Model*. Shingo Institute—Utah Univer-

sity. <https://shingo.org/model>

Theadore, J. C., & Anderson Jr., C. (2010). Critical Success Factors: Pursue Operational Excellence. *Radiology Management*, 32, 43-44.

Xia, N., Zou, P. S., Griffin, M. A., Wang, X., & Zhong, R. (2018). Towards Integrating Construction Risk Management and Stakeholder Management: A Systematic Literature Review and Future Research Agendas. *International Journal of Project Management*, 36, 701-715. <https://doi.org/10.1016/j.ijproman.2018.03.006>

## Survey

1. What is the name of your firm?
2. What category does your firm's activities fall under?
3. In your consideration there is a clear value of collaborative environment and systems that drive operational excellence?  
*Mark only one oval.* Yes  No
4. Why do many organizations fail to introduce a collaborative environment within their internal and external processes?
5. Is it clear that your organization's leadership is committed to operational excellence? How do the employees feel about this?
6. During Covid time, how heavily did the shift to a virtual collaborative environment affect your day-to-day operation?
7. What do our teams and customers think of this shift to a virtual collaborative environment and systems introduced?
8. What measures are in place in case one of those virtual environment malfunctions?
9. Prior to Covid, what processes have we used in the past to respond to external pressures? Were they effective? Should they be improved?
10. How are changes to processes reviewed, implemented and communicated throughout your organization?
11. Has your organization invested in optimizing their operations in terms of maintaining a collaborative environment?  
*Mark only one oval.* Yes  No
12. Do you agree that introducing a collaborative environment and systems can come with many risks, if not specify?