

## **Managing projects & making decisions under uncertainty in a cross-cultural environment**<sup>1, 2</sup>

**Gauranga Deka**

### **Abstract**

In November 2013, a reputed investment company on the east coast was in a difficult situation with several large clients' rebid at stake. The project team were in the process of building the next generation data warehouse & reporting platform. Unfortunately, it became clear that the MVP<sup>3</sup> delivery was unlikely in 2014 as planned. The company's reputation was at stake. Something had to be done. But what could be that "something"? Effective immediately, management asked the project team to stop all activities for 6 weeks. Within days, they formed a task force that included all stakeholders. Six weeks was the time given.

A working group was formed, initiated intense brainstorming sessions, the team was asked to analyze, invent alternative options & suggest recommendations as soon as practically feasible. After causal analysis, the group identified that the primary issues were around oversimplification in identifying dependencies, issues with forecasting/estimation, improper sequencing & invisible queuing of work products. Within weeks, a set of empirical tools developed for impact analysis as well as estimating the remaining work. Created new delivery base line, identified sequencing bottlenecks & node points. Though not eliminated, using available tools at disposal, the queuing in the systems was monitored/managed. Also, for the first time, scaled agile/lean concept was introduced incrementally.

Finally, by November 2016, when the final version of the product was rolled out to the entire client base, the project officially ended thus marking the success of this complex initiative.

---

<sup>1</sup> *Editor's note: Second Editions are previously published papers that have continued relevance in today's project management world, or which were originally published in conference proceedings or in a language other than English. Original publication acknowledged; authors retain copyright. This paper was originally presented at the [15<sup>th</sup> UT Dallas PM Symposium in May 2023](#). It is republished here with the permission of the author and conference organizers.*

<sup>2</sup> How to cite this paper: Deka, G. (2024, 2023). Managing projects & making decisions under uncertainty in a cross-cultural environment; presented at the 15<sup>th</sup> University of Texas at Dallas Project Management Symposium in Richardson, TX, USA in May 2023; republished in the *PM World Journal*, Vol. XIII, Issue III, March 2024

<sup>3</sup> MVP – Minimal Viable Product

## Introduction

The Retirement Services (e.g., 401k) industry in US is a big business. In 2021, an estimated 102.6 million individual investors owned mutual funds, and at year-end, these investors held 88 percent of total mutual fund assets directly or through retirement accounts. Total US retirement assets were \$33.6 trillion as of December 31, 2022<sup>4</sup>. One of the largest providers of 401(k) services was in a legally binding commitment with a high value institutional client to build the next generation data warehouse & the reporting platform. Business case had been approved with multiyear funding plan. A substantial number of resources were invested for several months to choose the appropriate technology stacks.

By Q2 of 2013, Subject matter experts & technical skilled resources were on boarded, the core teams were formed. Project charter was created, reviewed, and approved. Scope was agreed upon among the stakeholders. The execution of the projects i.e., design and development activity started concurrently. First major delivery was planned in 1<sup>st</sup> / 2<sup>nd</sup> week of December before the yearly freeze. In October, in one of the management review meetings a few risks were identified which are likely to be mitigated by the time the first trance goes live on production.

By mid-November, however, when the user acceptance testing had failed below the acceptable threshold, it became pretty evident that the project was not going to make it to go live timeline. The project steering committee called for an emergency meeting to assess the situation. It was a seasoned management team. It did not really take them long to decide not to proceed as planned. The project health marked “Red” as per the organization PMO<sup>5</sup> standard. Effective immediately, all project work were stopped. A task force was formed to find out the root cause & viability of the project. Six weeks was the time allotted to come up with a set of recommendations & alternative options.

## The Task Force

Task forces<sup>6</sup> are work groups typically comprising experts in specified areas of knowledge or practice. Usually, they are small groups of people and resources—brought together to accomplish a specific objective, with the expectation that the group will disband when the objective has been completed. Purpose is one of the key elements of a task force, one which influences how the group is organized and structured. Most task forces are organized to accomplish a set of basic purposes. Nearly all task forces are charged with conducting some research/brainstorming on the problem area to be addressed. This may include needs

---

<sup>4</sup> [https://www.ici.org/statistical-report/ret\\_22\\_q4](https://www.ici.org/statistical-report/ret_22_q4)

<sup>5</sup> PMO – Project Management Office

<sup>6</sup> <https://www.aamc.org/media/21586/download#:~:text=Task%20forces%20are%20work%20groups,the%20objective%20has%20been%20completed> <https://www.ojp.gov/pdffiles1/Digitization/139324NCJRS.pdf>

assessments/reassessment of the situations based on adequate analysis. After the research is completed, the task force presents the information without judgment or recommendations to the person or group requesting it. Other task forces may be asked to develop recommendations based on the research of a previous group. Still others may have the authority to take further action on those recommendations.

Many a times, most task forces who are asked to study a problem are also asked to make recommendations on priorities and strategies for alleviating problems they have identified. These recommendations are not usually binding, but rather serve as additional information that will be considered by other decision-makers. The likelihood that the recommendations will be adopted will depend on the task force's degree of influence, both personal and collective, on the decision makers. Some task forces have the authority to go beyond a study and advisory role, and can actually develop strategies and take action on them. In this specific case the purpose of the task force was defined objectively. It was a small team comprised of experts from business, technology & infrastructure.

The team came up with a time bound plan. They set up several brain storming sessions with software developers, architects, business analysts, projects managers, product managers of related business units. In a few discussions, appropriate external vendors were also included as per the organization guidelines/protocols. The task force kept the steering committee updated on the findings on a weekly basis. Within a couple of weeks, they came up with a set of observations/findings, fairly detailed analysis of the root causes along with a set of recommendations with alternative options.

At a high-level the findings are as follows:

- **Oversimplification of the legacy system**

The experts did a deep drive into a few areas of the legacy system. The next generation data warehouse system was supposed to replace the old system with additional product features. However, it was found that in some of the cases the dependencies with other systems were not looked into appropriately.

- **Inadequate estimation/forecasting**

The forecasting of the schedule was too optimistic. That was because the estimation process was not objective – the historical reference either were not available or not given due attention. Also, people on the ground were not much involved in the estimation process.

- **Ineffective development processes**

The project did not follow the established software development processes which did exist in the organization. Agile teams were formed but there were not adequate interactions among the team members, though everyone was building the same product.

- **Ineffective Communication**

Stakeholders were not properly identified; roles & responsibility was vague.

- **Cross cultural, cross geographical teams**

The project team members were distributed in five different time zones. As such there were much fewer common interactions and communications. Availability was an issue. Also, there were cross cultural issues that impacted progress.

- **Motivation**

The developers & testers were doing work within their teams with very less interaction with other teams. In absence of an effective communication strategy, the overall goal was not clear to them. Since many of them did not have a big picture, they concentrated only on the immediate sprint/iteration goals.

- **Queueing of unfinished work products**

This was one of the major issues that impacted schedule. There were work products that should have been worked on by several teams before it can be moved into production. In some of the cases, some of the cycle time was less and completed in time, however it was on queue waiting to be worked on by another team. This increased the lead time. This created major issue specifically when it impacted the critical path.

- **Sequencing bottlenecks**

This is one area usually overlooked in smaller projects. However, in large engineering projects with several unknowns & complexities like internal/external teams, different time zones with minimal common available time, the sequencing of the work product is critical.

- **Dependency with other teams, with external vendors**

Some of the dependencies were not properly defined. Though each team, internal and external, knew that they were part of the overall product building effort, they were unsure about the level of expectation & timeline. They were unsure that we need to consider several regulatory constraints when dealing with other business units or external vendors.

- **Lack of transparent & meaningful status reporting**

The organization did have an established process of reporting. But for various reasons it was not effectively used. There were too many reports with very detailed views but getting an

overall meaningful summary was difficult. The sprint/iteration review spoke about the sprint. Many reports provide status on the quality, schedules & associated risks but the reporting of the meaningful progress of the critical work products with identified risks were unavailable. The existing Application Lifecycle Management (ALM) tool did not have a feature to provide customized critical reports.

While almost all the above findings were addressed in varying degrees of attention, keeping in view of the scope of this paper, I'd like to discuss some of them.

## **Estimation/forecasting**

This is one area where there was a lot of ambiguity. While estimation appears simple at the first glance, unless adequate attention is provided in estimating the size, work effort or scheduling, we tend to overlook dependencies, constraints and underestimate. At the very initial stage, during the creation of the business case, high level estimate with rough order of magnitude with low confidence level works. However, once the interdependencies are identified and commitment to business is required, it is important to provide estimates with high level of confidence & forecast a reasonable timeline.

There are several estimation methodologies which can be used, i.e. Function Point Analysis, Requirement point analysis etc. The evidence on differences in estimation accuracy of different estimation approaches and models suggest that there is no single "best approach" for all scenarios. The relative accuracy of one approach or model in comparison to another depends primarily on the context of the project or the organization. In most cases, every organization may need to build its own estimation & forecasting framework. In this specific case, it was observed that there was a strong tendency towards over-optimistic effort estimates. This is one aspect which should have been properly managed to increase accuracy of effort estimates. Generally, following factors are important:

- **Wishful thinking**  
it is the formation of beliefs based on what might be pleasing to imagine, rather than on evidence, rationality, or reality. Many times, we tend to come up with set of estimations not because of evidence or real data but because of our belief and desire.
- **Anchoring effect:**  
Within software development projects, there is a common tendency to rely too heavily on the first piece of information available when making decisions on forecasting. Regardless of the accuracy of that information, during decision making process, project managers tend to use initial piece of information as a reference point to make subsequent judgments. This could be error prone.

- **Planning fallacy**

This is a phenomenon in which predictions about how much time will be needed to complete a future task, display an optimism bias and underestimate the time needed. This phenomenon sometimes occurs regardless of the project managers knowledge that past tasks of a similar nature have taken longer to complete than generally planned. The optimism bias causes the project managers to believe that they themselves are less likely to experience a negative event. The project managers are often more optimistic than those encountered in similar projects in the past. So, they tend to underestimate the time, costs, and risks of future actions and at the same time overestimate the benefits of the same actions. This planning fallacy results in not only time overruns, but also cost overruns and benefit shortfalls.

Based on the experience, we know that it is relatively easy to estimate what is known. It's slightly hard to estimate what is known to be unknown. But it is very hard to estimate what is not known to be unknown. In this specific project, the project task force, after several round of brainstorming sessions, built an empirical MS excels based tools that takes into account of several past project completed within the business unit, identified internal & external dependencies, effort required for requirement analysis, design, co-ordination, test data preparation, environment co-ordination required, effort/time required for onboarding new resources, entitlement required etc. The team then came up with overall effort estimates. Based the high-level work breakdown structure & critical path analysis, built the product deployment schedule. This was vetted by the SME<sup>7</sup>s and steering committee & accordingly published.

## **Development processes**

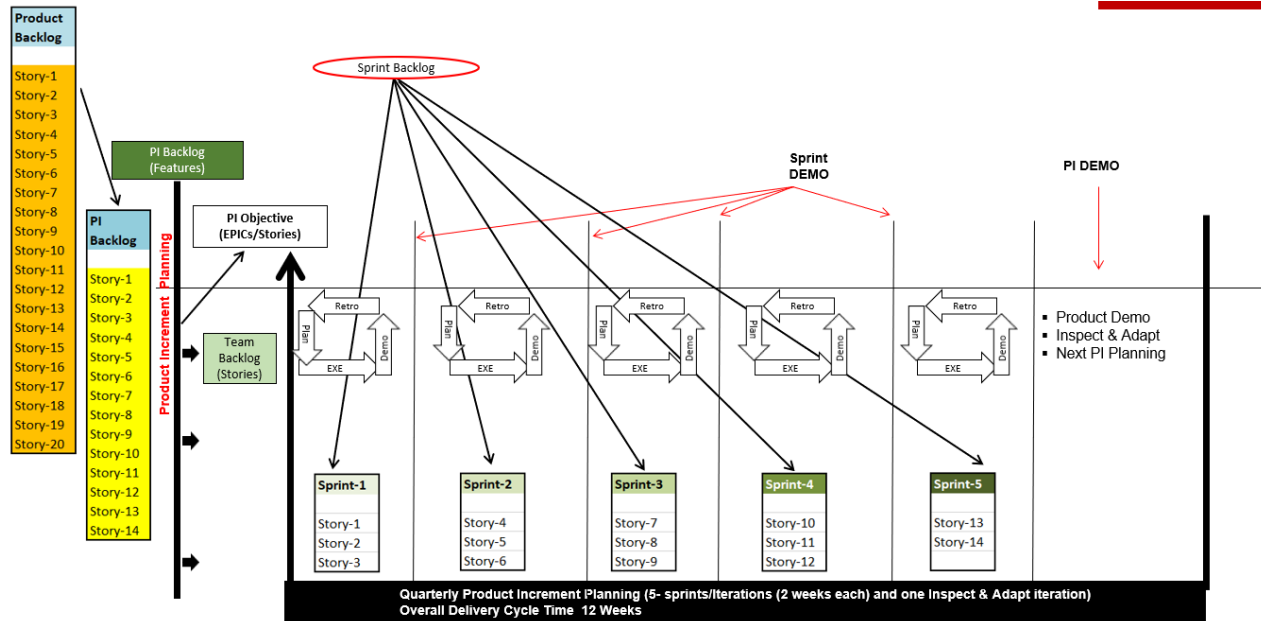
One of the major learnings of the initial failure was that the effective engagement of the business teams, technology teams & other stakeholders is critical. Also, the transparency of the system is important. Everyone also agreed that it is almost impossible to identify all the tasks and plan for multi-year long project. That is when, after due deliberation & brainstorming, it was decided to implement agile framework on a step-by-step basis. At the same time, it was realized that senior management must have a holistic view of the overall progress of the product building effort. We decided to follow a hybrid model. We decided to follow Scaled Agile framework within the well-established iterative development framework of the organization. We have it integrated with the PPM<sup>8</sup> framework & effort tracking system.

---

<sup>7</sup> SME – Subject Matter Expert

<sup>8</sup> PPM - Project & Portfolio Management (PPM)

Conceptual diagram:



Queueing/sequencing

Queueing is an invisible enemy. During the initial years of working career, I had spent considerable amount of time in a manufacturing shopfloor in the engine & transmission division of an automobile company. That is when I got training & first-hand exposure to the Total Quality Management (TQM) & Toyota Production Systems (TPS). Both TPS & TQM talk extensively on cost of rework and waste prevention. I tried using that prior experience to reduce work in progress (WIP) items and reduce the lead time in building a finished product. The goal was that a software component should not be waiting to be worked on and that it should pass through the flow as soon as possible. The waste of Queues stops the process flow, which impacts the throughput of a software development process adversely, in the same way as in the manufacturing operations. In fact, queues are one of the eight wastes of lean manufacturing, it simply means doing nothing. Missing information can promote waiting, either through unclear or missing data, to conduct work or even through waiting to know which component is required next. Poorly designed processes also promote unnecessary waiting. Anything which may cause queueing should be addressed. In fact, queueing should be prevented to the extent possible.

Communication

It is a common knowledge that effective communication is the key in managing any project, unfortunately, however, it is not so common especially in large organizations. In this specific

instance, the project team members were located across several different time zones in Ireland, China, USA & India. Based on the findings & recommendations of the task force, we re-defined roles & responsibility for each and every individual, updated RACI<sup>9</sup> Chart, the stakeholder details, appropriately defined the groups to be communicated & published the escalation hierarchy. To increase productivity, reduced number of meetings & unless specifically required, tried to keep meetings for 30 mins or less. We made it mandatory to have an agenda for each meeting & minutes of meeting stored in common repository (in this case on confluence). Also, made it a point to make as much contiguous timeslot available for the technical team for core software development work. The calendar for the year was published well in advance. The Product Increment duration was defined as 3 months i.e., 6 iterations. The Planning event was organized each quarter with active participation of all the stakeholders including business, product management and senior management team. The EPICS<sup>10</sup> & user stories were refined on a regular basis and tried to keep user stories ready for 2 iterations in advance. During the planning event, potential risks were identified, accepted and owners were assigned. The team working agreement, definition of ready & definition of done for each phase were defined and updated appropriately as required.

## **Status Reporting**

It is one of the most important parts of project management. Different status reports required for different levels of stakeholders e.g., Project teams, Business team, Steering committee, Investment committee etc. While some of it can be standardized, in some critical projects, the project managers need to create appropriate status reporting processes for addressing risk & monitoring the progress. In this specific project, it was important for the management to track the cumulative production deployment of data repository each month. So, in addition to standard core agile ceremonies, sprint reviews, system demos<sup>11</sup> we had to build another mechanism to gather accurate data so that appropriate reporting could be provided. E.g.

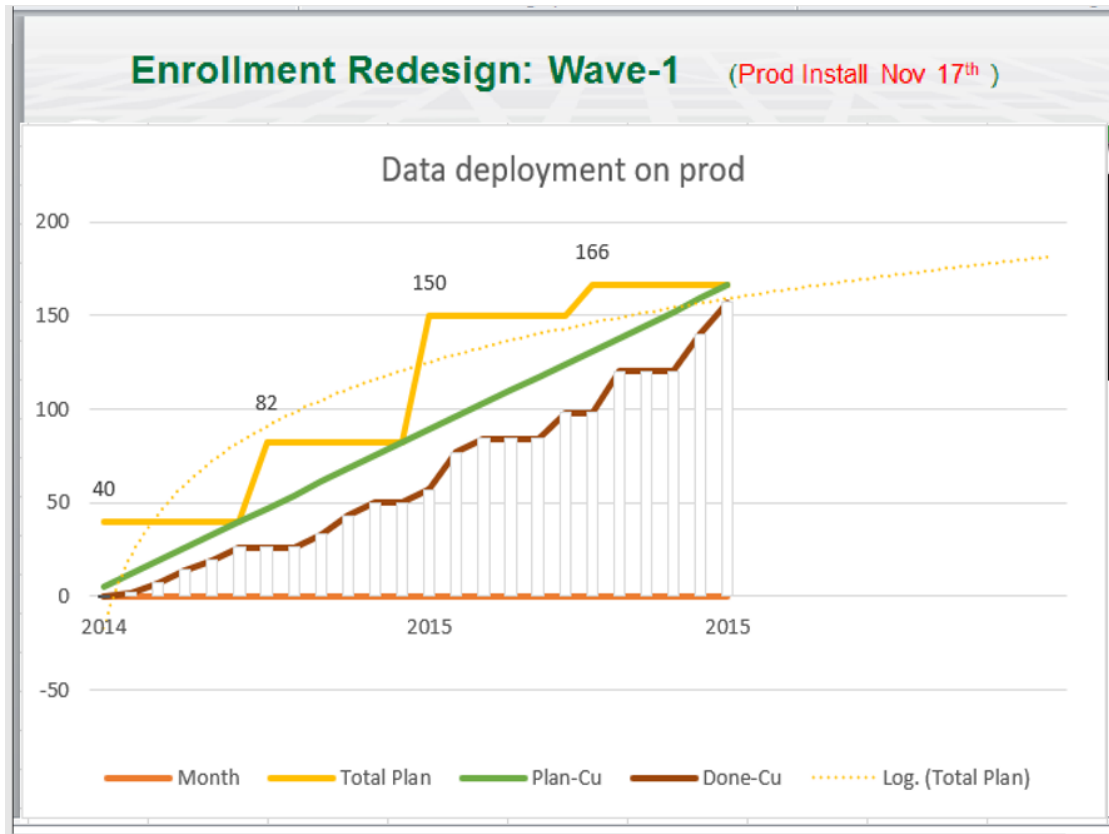
---

<sup>9</sup> Responsibility assignment matrix, RACI: R=Responsible, A=Accountable, C=Consulted, I=Informed

<sup>10</sup> EPIC - An epic is a large body of work that can be broken down into a number of smaller user stories, Epics often encompass multiple teams. Epics are almost always delivered over a set of iteration/sprints.

<sup>11</sup> The System Demo provides stakeholders an integrated view of new features for the most recent iteration delivered





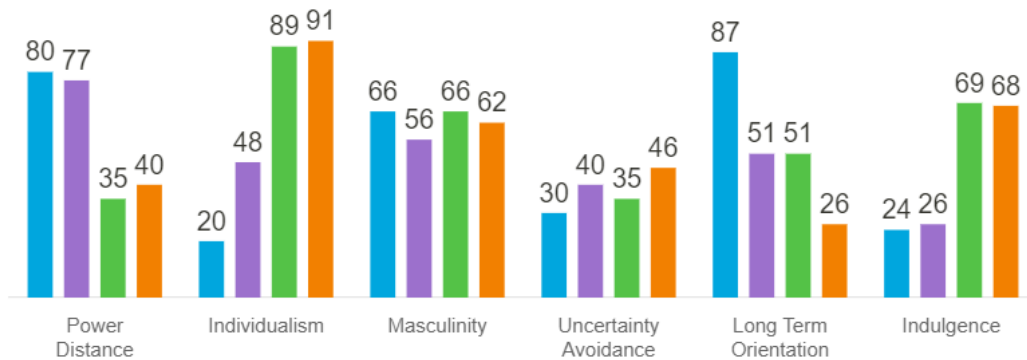
## Global team

Managing a project which involves people from different cultures around the globe does bring new challenges. A Project Manager needs to realize that cultural differences can act as a barrier to communication, and that they could affect his/her ability to build connections and motivate people. So, how can the project managers begin to understand these differences and work effectively with people from different cultures? For that it is important to accept that different cultures may have different value systems.

At the end of the 1970s, one of the famous psychologist Dr. Geert Hofstede, based on a decade of research, published his cultural dimensions model. Since then, it's become an internationally recognized standard for understanding cultural differences. Hofstede studied people who worked for IBM in more than 50 countries. Initially, he identified four dimensions that could distinguish one culture from another. Later, he added fifth and sixth dimensions, in cooperation with Drs Michael H. Bond and Michael Minkov. Some of them are very useful for project managers.

- **Power Distance Index (PDI high versus low)**

This refers to the degree of inequality that exists – and is accepted – between people with and without power. A high PDI score indicates that a society accepts an unequal, hierarchical distribution of power, and that people understand "their place" in the system. A low PDI score means that power is shared and is widely dispersed, and that society members do not accept situations where power is distributed unequally.



\* estimated



**Application**

According to the model, in a high PDI<sup>12</sup> country, such as India (77), China (80), team members may like to be guided and directed to complete a task. If a project manager doesn't take charge, the team members may think that the task isn't important. Alternatively, in a low PDI country UK (35), USA (40), the team members will likely need less guidance or direction.

- **Individualism Versus Collectivism (IDV)**

This refers to the strength of the ties that people have with others within their community. A high IDV<sup>13</sup> score indicates weak interpersonal connection among those who are not part of a core "family." Here, people take less responsibility for others' actions and outcomes. In a collectivist society, however, people are supposed to be loyal to the

<sup>12</sup> PDI – Power Distance Index; <https://geerthofstede.com/>

<sup>13</sup> IDV - Individualism

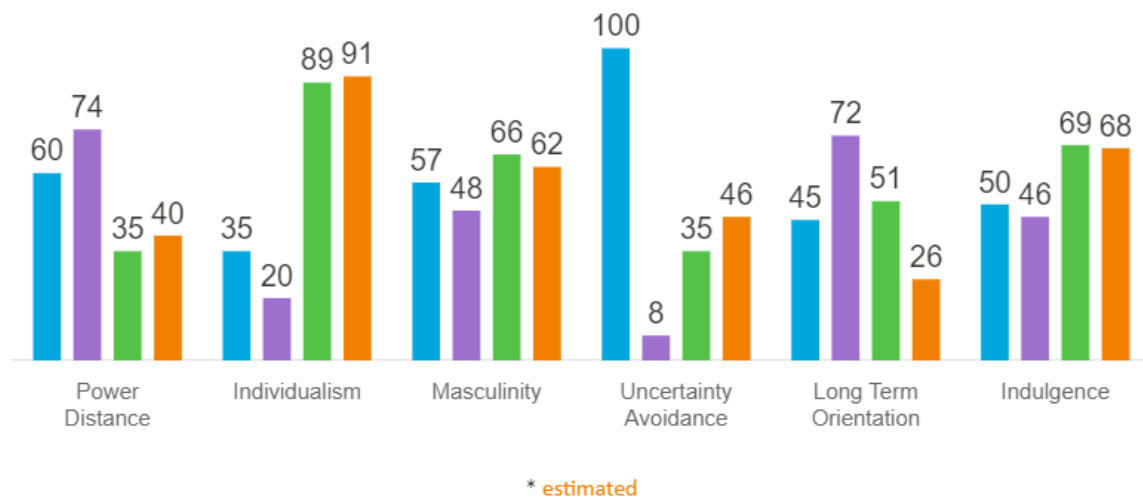
group to which they belong, and, in exchange, the group will defend their interests. The group itself is normally larger, and people take responsibility for one another's well-being.

**Application**

Countries like China low IDV scores (20). So, we can infer the Chinese is a more collective society than either USA (IDV-91) or UK (IDV-89)

- **Uncertainty Avoidance Index (UAI, high versus low)**

This dimension describes how well people can cope with anxiety. In societies that score highly for Uncertainty Avoidance, people attempt to make life as predictable and controllable as possible. If they find that they can't control their own lives, they may be tempted to stop trying. These people may put their fate "in the hands of God." People in low UAI-scoring countries are more relaxed, open or inclusive. Bear in mind that avoiding uncertainty is not necessarily the same as avoiding risk. Hofstede argues that we may find people in high-scoring countries who are prepared to engage in risky behavior, precisely because it reduces ambiguities, or in order to avoid failure.



**Application**

In Hofstede's model, Greece tops the UAI scale with 100, while Singapore scores the lowest with eight. Therefore, during a meeting in Greece, a project manager might be

keen to generate discussion, because there's a cultural tendency for team members to make the safest, most conservative decisions. The aim should be to encourage them to become more open to different ideas and approaches, but it may also be helpful to provide a relatively limited, structured set of options or solutions.

- **Long- Versus Short-Term Orientation**

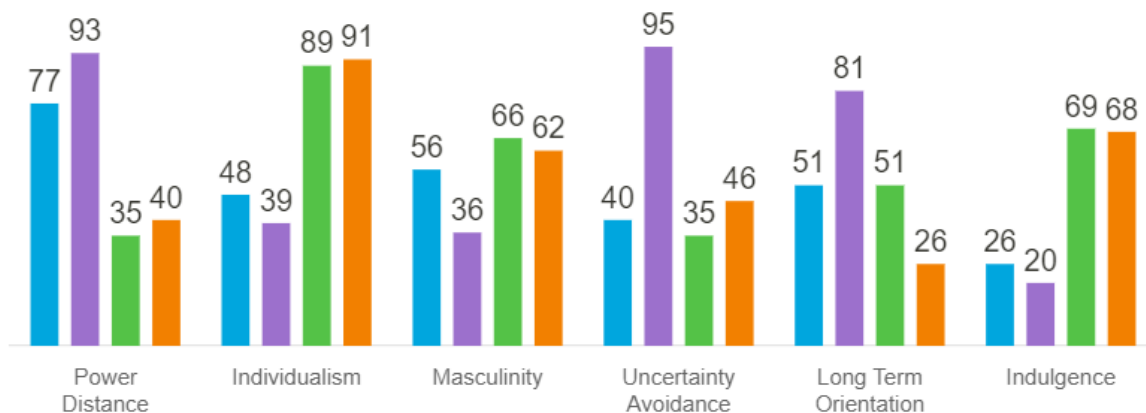
Countries with a long-term orientation tend to be pragmatic, modest, and thriftier. In short-term oriented countries, people tend to place more emphasis on principles, consistency and truth, and are typically religious and nationalistic.

**Application**

The U.S. has a short-term orientation. This is reflected in the importance of short-term gains and quick results (profit and loss statements are quarterly, for example).

- **Indulgence Versus Restraint (IVR)**

Countries with a high IVR score allow or encourage relatively free gratification of people's own drives and emotions, such as enjoying life and having fun. In a society with a low IVR score, there is more emphasis on suppressing gratification and more regulation of people's conduct and behavior, and there are stricter social norms.



\* estimated



### **Application**

According to the model, countries like Russia, India have a low IVR score. Hofstede argues that these countries are characterized by a restrained culture. On the other hand, people with high IVR, follows own drives & emotions.

### **Conclusion**

Projects are a part & parcel of modern-day life. The world is constantly evolving. New realities are coming up. The playing field is being levelled & the context is becoming more global. Gone are the days when we were able to create a project plan with a known set of tasks, resources. In today's world, there are multiple variables that impact the success of a project.

Today's project managers are required to be more adaptive, take several critical decisions in relatively uncertain conditions. Adoptive thinking is an active process; it is a behavior which one does with his or her knowledge. Research has proved that adoptive thinking is not a knowledge, but a habit issue. In fact, repetitive performance causes behavior to become automatic. Understanding different cultural context & judiciously applying learnings are key to managing a project successfully.

Working virtually is a reality in the post covid-19 world – hence communication with the team members & other stakeholders is getting important. As we have learnt, human beings are the only asset in the project management context that requires motivation. Now a days, the physical proximity is more or less irrelevant. We need to apply more effective instrument of motivation.

In today's world, technical skills and domain knowledge is important but not sufficient. A skillful project manager must be trained to analyze situations & develop good adoptive thinking. He needs to make adjustment within the context of the overall plan, either to exploit the advantage or minimize the harm of unanticipated event, in short, he or she will need to adopt to conditions for a more successful outcome.

Today's Project Managers must continue assessing situations, deal with individuals under stress, monitoring progress of multiple activities of a complex plan. At any given point in time, multitude of events may compete for a project manager's attention. He will continue to make decisions in uncertain situations.

## References

1. Daniel Kahneman, 2011, Thinking, fast and slow
2. Peter F. Drucker, 1970, The Practice of Management
3. Malcolm Gladwell, 2011, Outliers
4. Atul Gawande, 2011, The Checklist Manifesto
5. Avraham Shtub & Moshe Rosenwein, 2017, Project Management Processes, Methodologies And Economics
6. Darren Dalcheir, 2022, Rethinking Project Management for a Dynamic and Digital World
7. PMBOK® Guide – Sixth Edition (2017)
8. <http://geerthofstede.com>
9. <https://www.mindtools.com/a1ecvyx/hofstedes-cultural-dimensions>
10. Dean Leffingwell, 2017, SAFe® Reference Guide
11. Deka, G. (2023). Rethinking Project Management for a Dynamic and Digital World, book review, PM World Journal, Vol. XII, Issue II, February. <https://pmworldlibrary.net/wp-content/uploads/2023/02/pmwj126-Feb2023-Deka-Rethinking-Project-Management-For-A-Dynamic-And-Digital-World-book-review.pdf>
12. Dr. James W. Lussier, Mr. Scott B. Shadrick, U.S. Army Research Institute – Fort Knox, Armored Forces Research Unit, KY, USA “Adaptive Thinking Training For Tactical Leaders”
13. Deka, G. (2022). Project Management: Processes, Methodologies and Economics, book review, PM World Journal, Vol. XI, Issue XII, December. <https://pmworldlibrary.net/wp-content/uploads/2022/12/pmwj124-Dec202e-Gauranga-Project-Management-Processes-Methodologies-Economics-book-review.pdf>

## About the Author



### **Gauranga Deka**

Dallas-Fort Worth, TX USA



**Gauranga Deka**, PMP, PMI-ACP, SAFe SPC4 is an IT Project Manager with sustained expertise in building complex software solutions. Currently, he is a member of Project Management Institute & PMI Dallas Chapter. In last 20+ years, he has been leading critical roles in the development of very large, complex, mission critical software products in Banking/Financial Services Domain. He is well versed in software size & effort estimation, forecasting, Agile, Scaled Agile framework (SAFe) & Water fall model of software development process. He has authored & published scholarly articles on software project management topics. He regularly reviews articles as well as books on the project management area, some of which are published on PM World Journals periodically. Mr. Deka, as a mentor, guides young project managers/agile practitioners in the Dallas-Fort Worth Metropolitan Area & also participates on expert panel to discuss important topics that influence contemporary project management processes in the PM Symposium at the University of Texas at Dallas TX.

Gauranga Deka received his B.S. in Mechanical Engineering from MANIT, Bhopal and Executive MBA from the Indian Institute of Management, Bangalore, India.

Email address:

[G\\_deka@yahoo.com](mailto:G_deka@yahoo.com)

<https://www.linkedin.com/in/gurangadeka>