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1.1 Abstract

The Global Delivery Model (GDM) has revolutionized software project execution over the last two decades resulting in major cost benefits to customers. Evolving over the last few years is a new flavor of GDM, GDM 2.0 →GDDM 1.0(Globally Distributed Delivery Model).

The 'Distributed' in GDDM can be defined as 'Managing a project with teams across multiple locations, time zones, cultures and service providers. Though this is not exactly a new project management trend or a paradigm shift, the core complexity lies in managing this globally distributed team on the whole. This paper focuses on the drivers/need for GDDM and the challenges faced in such scenarios, based on the real world experiences of handling globally distributed projects. It provides best practices, tools and techniques, framework, team structure, performance management and knowledge sharing that would help the Project Managers overcome those challenges. The primary challenge and focus for a successful execution is on 'communication' – modes, frequency and process. The Project Manager should not compromise on the overall productivity of the team by having too many status calls for tracking progress. The complete co-operation among the team members-flexibility, team work and trust plays a key role in the successful execution of the project.

With the current pace of globalization tearing down physical, cultural, operational boundaries, GDDM is inevitable. Acceptance and adaptation of this would define the success of IT service providers in the next decade. GDDM can very well be extended to Medical / Financial research and Manufacturing units besides Software and BPO industries.

1.2 Keywords

- Globally Distributed Delivery Model (GDDM)
- Global Delivery Model (GDM)
- Proxy Manager
- Project Management Tool (PMT)

1.3 Introduction

The Global Delivery Model (GDM) has revolutionized software project execution over the last two decades resulting in major cost benefits to customers. Evolving over the last few years is a new flavor of the Global Delivery Model, GDM 2.0→GDDM 1.0(Globally Distributed Delivery Model). The 'Distributed' in GDDM can be defined as 'Managing a project with teams across multiple locations, time zones, cultures and service providers'. GDDM is not a new project management trend or a paradigm shift, but an incremental layer of challenge on top of GDM with extra focus on communication and collaboration, a challenge inevitable in today's globalized workplace.

With the real world experience of handling globally distributed projects, this paper examines the evolution of GDDM, execution of a GDDM based project by setting a basic operational framework, describing the challenges faced and the strategic best practices demonstrated to overcome those challenges.

1.4 GDM 2.0→GDDM 1.0

GDM generally refers to a homogeneous onshore-offshore team with around 10-30% of the team located onshore for client interfacing and the remaining 70-90% of the team at an offshore location responsible for development / maintenance of the application. GDDM, closely aligned with GDM, takes a shift by executing the project in multiple locations distributed across the world.

GDM + (Transformational force) = **GDDM**

This paper elaborates on this 'Transformational force' to achieve GDDM.

Large customers, being more mature and knowledgeable, outsource projects to multiple service providers to reduce risks. To achieve the best in class deliverable, niche players are chosen for certain parts of the projects, say for Business process consulting or Architecture definition. The Project Manager handles the project, executed in a globally "Distributed" environment with the team members from different service providers and located in different parts of the world. The absolute effort needed for a project to be executed in GDDM is more than GDM due to more effort spent on communication and project management as given in the Figure 1

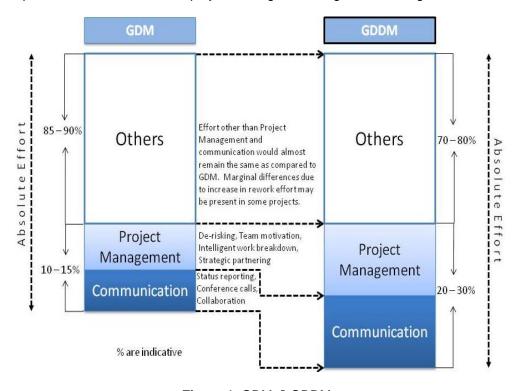


Figure 1: GDM → GDDM

1.4.1 Flavors of GDDM

- Project executed within an organization's IT department with the project team being distributed across the world in different locations, especially when the organization has captive development centers worldwide.
- Project executed by different vendors, each of them having a distinct responsibility depending on their area of expertise, managed by a Project Manager from the supplier organization.
- Combination of 1 and 2 which is more prevalent today, where the organization wants to maintain a base team in its captive development centers for cost advantage / knowledge retention and procure additional capacity from IT service providers who could increase or decrease their team size with a short notice.

1.5 GDDM Methodology And Process

Though "ONE SIZE FITS ALL" may not be applicable for project management, devising a methodology for the initial set up would definitely help in reducing/mitigating risk impacts proactively. Laying additional emphasis on some of the basic principles of management in this methodology—Division of work, Authority and Unity of Command—can enable its success in execution and provide benefits to all stakeholders.

1.5.1 Team Structure - Proxy Manager / Situational Leadership

It becomes absolutely necessary to have a formal team structure in place without any ambiguity – with a Proxy Manager in each time zone, not necessarily at each location. The Proxy Manager has end to end responsibilities for project execution from all the locations in that time zone and he is empowered to take decisions by the Project Manager. The Situational leadership role of Proxy manager becomes more vigilant during crisis and critical milestones. This avoids the long delays in waiting for the Project Manager, leading to better productivity. The proxy managers report to the Project Manager, the ultimate authority. Such an established team reporting structure would prevent any issues of having multiple leads/managers.



Figure 2: Suggested Team structure in GDDM

1.5.2 Work Allocation

Having spent enough time on understanding the strengths of each of the team members, the Project Manager allocates work to the team, with enough due diligence, considering the criticality, complexity and type of work. The tasks which require multiple rounds of discussions with frequent approaches to the Project Manager for clarifications/suggestions as well as his/her final decision should be allocated to co-located teams or to teams present in the same time zone, saving on waiting time and delay in communication. It is extremely important to tag the tasks with clear priorities as remote teams work on multiple activities. Priority is a dynamic attribute and hence this is more like a continuous activity rather than a onetime activity. The strategic business leadership skills of the Project Manager get reflected in the measurable goal oriented work allocation (say, number of acceptance defects).

1.5.3 Team Size

Projects executed in GDDM should have an overall size of at least 20 and the team size at each location should have a minimum of five people. Otherwise it will require very high management and communication overhead which will nullify the benefits of GDDM model and may even lead to the failure of the project.

1.6 Challenges And Strategies In A Gddm Project

The challenges in GDDM may not be completely unique as compared to GDM but the impact of these challenges is much higher and sometimes not known till it hits hard on one or more of the project constraints, such as Scope / Time / Cost / Quality. Even if each organization has a very well defined process model for executing projects, the "distributed" nature of such projects will have huge impact on the project.

1.6.1 Effective Communication

1.6.2 Challenge

Striking a good balance between too much and too little communication is the key and is a major challenge for GDDM. Lengthy calls for status tracking affects the project two-fold by wasting the time of the Project Manager and his/her team and imposes a 'lack of trust' factor on the Project Manager. Holding the entire team on status calls results in huge productivity loss and spoils the good-will of the Project Manager.

To keep all the teams updated on the same page, the communication effort doubles/triples, with the teams distributed across the globe. It is a challenge for the Project Manager to keep this in control without affecting the project attributes. It is a daunting task to estimate this correctly upfront and convince the stakeholders on the estimated effort. This percentage lies between 10%-15% for a normal project where as in GDDM type of projects it varies from 20%-30% based on the real world project experiences. Communication effort is directly proportional to number of locations / team across the world.

1.6.3 Strategies / Success factors:

1.6.4 Status Meetings and Conference Calls - Frequency and Timings

The optimum time and frequency of the different applicable communication modes should be set up considering the different time zones in which the teams operate. If required, the Project Manager could benignly change his/her work schedule to take up calls during his/her evenings which would have a huge positive impact on the team's morale and boost up the good-will of the team on the Project Manager. This would create a win-win situation as the Project Manager would get the deliverable ready his/her next day morning.

The participants of the calls should be identified — in order to avoid productivity loss of multiple talents. Experience shows that, unless required, any conference call having more than 6-8 people would be waste of time. Required talents need to be active on the call only at the required time to provide status updates and need not be present for the entire duration of the call.

One or more of the communication options given in the figure 3 can be chosen as needed for the GDDM project.

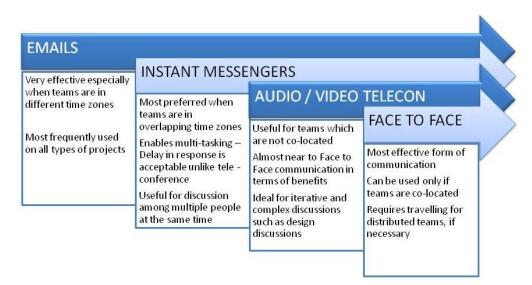


Figure 3: Communication modes

1.6.5 Collaboration and Team work

1.6.6 Challenge:

Collaboration and team work gains more importance in a GDDM based project as the teams seldom get a chance to meet each other in person and could result in worksilos. The teams try to push the work back and forth amongst themselves for the responsibility of border-line requirements between interfacing systems. This might result in frequent escalations to the Project Manager. The Project Manager has to spend a significant amount of time in resolving these conflicts which would heavily impact the project.

1.6.7 Strategies / Success factors:

The Project Manager would have to adapt to the strategy "SPEND EFFORT TO REDUCE EFFORT" – spend more effort upfront to make the teams understand the system on the whole and the applicable business cases. The critical success factors of the project and the vision of the project sponsors needs to be set clearly to the teams. A kick-off meeting with the goals of the project and the plans to achieve it would be required with all the teams actively participating. The Project Manager has to bring in the feeling of one team across globally distributed teams, by conducting regular update sessions on the ongoing project activities and making the team understand how each member's productive work contributes to the success of the project — unity in diversity. This would motivate the team and increase the trust on the Project Manager. Thus the Project Manager spends less effort on resolving issues related to team dynamics — "SPEND EFFORT (EARLY) TO REDUCE EFFORT (LATER)".

1.6.8 Sustainability – Critical Resources and Workaholics

1.6.9 Challenge:

Due to the inherent nature of GDDM, there is a high possibility of the team members spending extended hours at work due to one or more of the following reasons.

- Spending more time on communication with different stakeholders in order to meet the deadlines
- ◆ Due to incorrect estimation of the work for a GDDM based project
- ◆ Differences in understanding of the requirements resulting in lot of rework

This might not be found or given importance by the Project Manager as long as the project goes on schedule. Over a period of time, this might result in impacting the team's motivation, productivity and in turn the quality of the deliverables.

1.6.10 Strategies / Success factors:

Identify the talents working for extended hours – this is easier said than done since these resources may not be directly visible to the Project Manager unless the Project Manager has the right processes in place to get the information.

The individuals with unique skills and key to the project success have to be identified and specially rewarded. This would result in a win-win situation for both the Project Manager and the team members. At the same time, the Project Manager should look at the options of backing up the critical talents and mitigate any risks that could occur.

1.6.11 Cultural Sensitivities and Differences

Managing cultural sensitivities and differences across the teams spread globally, is another striking challenge. It is a great challenge for the Project Manager to understand these differences and act accordingly. The following examples vary from culture to culture.

 Average working hours per day (more than 10 hours vs. 8 hours depending on the country)

- Communication in a low and less aggressive voice in teleconferences (implying less assertive and lacking confidence vs. being polite),
- Saying "No" (could mean being blunt and offensive vs. being honest and assertive)

1.7 Best Practices

1.7.1 Atomic guidelines for Project Managers – small yet big

- ◆ Effectively manage Do not micro-manage. Enable the team to effectively perform the job and have the required checks and balances to monitor the progress of the project. Obsessive status tracking can be counterproductive to the success of the project.
- ◆ **Develop Trust A mutual attribute** which reflects positively on the work done by the team members.
- ◆ Budge little, breathe long By getting to know the major events (say sporting events) taking place in the different location of the teams, the Project Manager can allocate work for an extended duration, without affecting the overall schedule of the project. For instance, a chunk of work to be completed on a weekly basis instead of on a daily basis, during that period. This would enable the team to take part in the major events, at the same time work at their convenient time of the day, motivating them to perform better and imbibing a sense of responsibility.

1.7.2 Team Motivation

Finding out when the team morale goes down and working on it should be one of the ongoing parallel tasks for the Project Manager. Below are few of the motivation factors which would satisfy a major population of the distributed team.

- Ensuring work life balance of the teams spread globally. Only if it is absolutely necessary, the team should work for extended hours
- ◆ Intervene and make sure that the teams are getting the right information from other teams at the right time by implementing right processes in place
- Timely acknowledgement and appreciation of the work done by the team

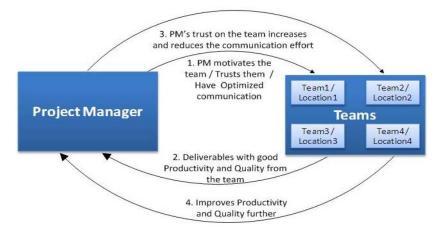


Figure 4: Iterative Benefits through Team Motivation

1.7.3 Processes and Tools

1.7.4 Project Management Tool (PMT) (For Distributed Projects)

The advancement in technology like online meeting and collaborative tools makes it possible to efficiently manage projects in GDDM. It is the Project Manager's responsibility to identify the right type of tool which suits the project's custom needs. Based on experience, it does prove worthy in spending time to develop a Project Management Tool (PMT), which can be used for Knowledge Sharing and Status Tracking in a distributed environment.

PMT serves as a one-stop shop for all the stakeholders to view/update the status of all the Release level activities. PMT can be configured with Access Control List with different permission levels for Team members, Managers and Senior Executives so that appropriate permission levels can be set.

The following are some of the features of PMT

- To trigger automatic email alerts/ reminders to the concerned stake holders whenever the specified conditions are met/not met
- ◆ To give a consolidated list of milestones, current critical issues, owner of each issue/task to avoid duplicate work allocation
- To generate custom reports on click of a button, saving the Project Manager's time in status reporting to Senior Management
- Role based login, enabling the Senior Management to logon to the tool and track the latest updates dynamically

For mission critical projects, this tool can also be linked to an LED based Dashboard for CXOs, who can 'see' live updates of the project.

1.7.5 Contract type for GDDM

Generally, Fixed Price (FP) model would prove effective when working with vendors, rather than T&M model, as it is difficult to validate the teams' effective utilization of time. A variation of FP which is FP + Incentive type of contract would be a better choice.

1.7.6 Availability of Support personnel and Systems

All support systems such as Configuration Manager (for building and deploying kits) should be available throughout, failing which the team has to wait for a simple kit build, directly impacting the productivity. Creating an environment with 24x7 availability of support services, is imperative in GDDM software projects.

1.8 Benefits Of Gddm

The applicability of GDDM to a project could either be out of **choice** or **necessity**. Below are few of the high impacting benefits of GDDM.

- Flexibility in terms of talent pool Logical split up of competent pieces of work to leverage niche skills
- ◆ Maximum Cost Benefits Choose service providers offering competitive rates with agreeable quality of work. Though this might increase the complexity of the Project Manager's role, cost gains upper hand in majority of the scenarios
- Dynamic variation in capacity Option to increase / decrease the team size. With a standard base size in the captive development centers, the size of the other globally distributed teams can be dynamically modified at a short notice based on the availability of talent pools
- ◆ De-risking in overall business The business risk and uncertainty of the organization is transferred to third party IT Service provider(s). Global distribution also mitigates risks caused due to political instability and natural calamities
- ◆ Achieve the best quality for products developed Best utilization of the Centers of excellence human resource availability to achieve the best quality deliverables

1.9 Conclusion

GDDM becomes inevitable with the current pace of globalization tearing down physical, cultural and operational boundaries. Acceptance and adaptation of this would define the success of IT service providers in the next decade. If GDM is a byproduct of globalization due to cost advantage, GDDM is a byproduct of GDM to realize knowledge benefits.

GDDM professes that in the inevitability of a managing a distributed project, laying a little more emphasis on some of the basic principles of management and applying them earnestly and astutely will definitely lead to success of such projects. Though GDDM cannot be in the same league of GDM in terms of breaking new ground or the amount of impact, it undoubtedly provides an opportunity for organizations to execute software projects in an à la carte mode.

GDDM is an evolving model providing more opportunities for innovative and dynamic aspects of project management. GDDM may very well be extended to Medical / Financial research and Manufacturing units besides Software and BPO industries since the projects in non-IT industries have scope to be divided and distributed across multiple locations to leverage the benefits of cost and expertise.

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1.11 About The Author



Karthikeyan Gopalan is a Senior Project Manager with Infosys Technologies Limited. He has a strong understanding of IT outsourcing and Global Delivery Model. Having more than a decade of professional IT experience, with over 7 years of experience in Managing and Delivering projects and programs for Fortune 500 customers in Global Delivery Model, he has successfully managed teams distributed in multiple locations across the world. Building large teams is his key skill in addition to Technical and domain expertise.

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