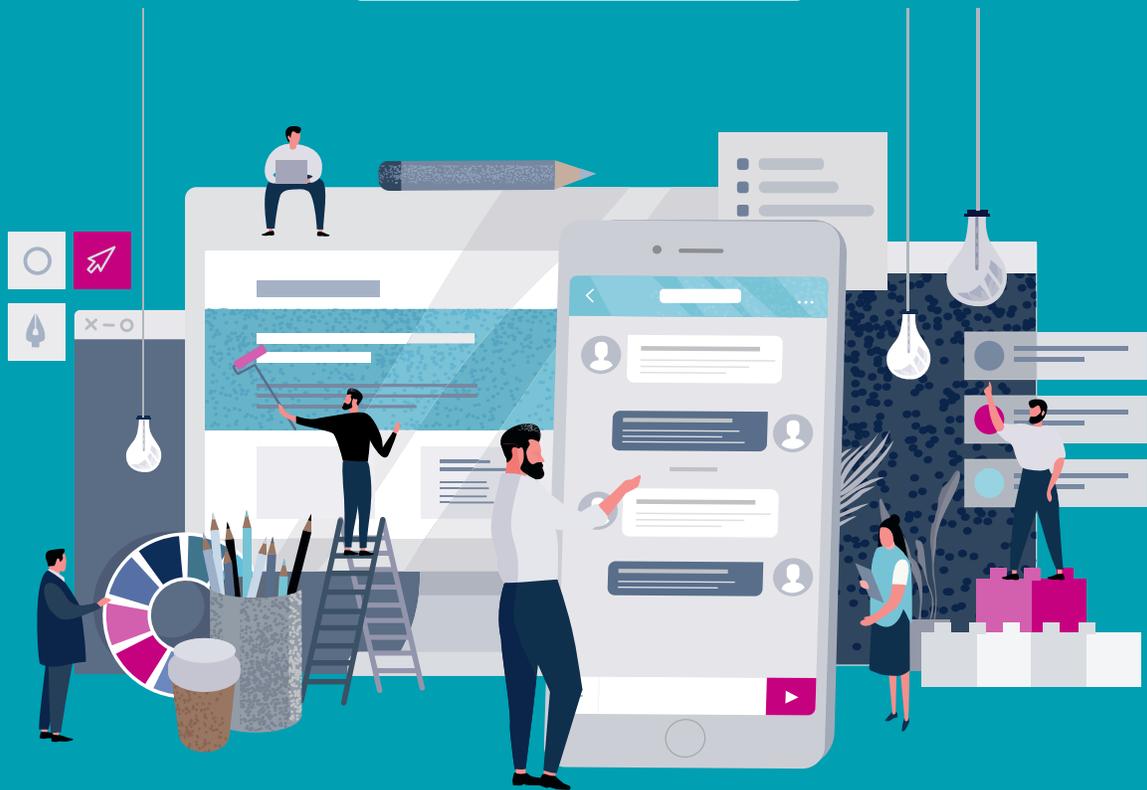


CREATING COLLABORATIVE INTELLIGENCE ON DISTRIBUTED PROJECT & PROGRAM TEAMS

BY MATT LIGHT



Planisware



About the author

Matt Light is Planisware's Vice President for Strategy & Corporate Development.

Previously he was Research Vice President for Gartner Inc.'s Program & Portfolio Management research group, where he led its cross-disciplinary PPM Research Community and authored its PPM "Magic Quadrant" market chart for many years. He wrote regularly on PMO topics, including research on "The Lean PMO," and wrote Gartner's first Research Note focused on Agile methodologies ("Agility with Quality"). He has two Master's degrees, including an MBA from the Jack Welch School of Business at Sacred Heart University (Fairfield, Connecticut).

- 1. Distributed projects & programs: the new normal 6**
 - 1.1. The Need to Bridge Place, Time, and Other Distances 6
 - 1.2. The Importance of Creating a Stronger Managerial Framework..... 7
 - 1.3. The Four Pillars of Success of a Distributed Team..... 9
- 2. How scattering teams geographically impacts project management. 10**
 - 2.1. Enabling Collaborative Project Management with More Autonomy and Flexibility.. 10
- 3. Methods and tools for better collaboration on distributed teams 11**
 - 3.1. The Implementation of a Project Methodology..... 11
 - 3.2. Embed Use of the Latest information Technology in Team Activities..... 12
- 4. Approaches to knowledge management and best practice sharing ... 13**
 - 4.1. Conduct Post-project Analysis 13
 - 4.2. Capture and Disseminate Know-how 14
- 5. From scattered teams to collaborative intelligence 15**
 - 5.1. Involve Employees in Advance 17
 - 5.2. Communication in Real Time..... 18
 - 5.3. Monitor Transversal Activities..... 18
 - 5.4. Share the Knowledge 19
 - 5.5. Install Collaborative Tools 19
 - 5.6. Measure and Evaluate 20
- Endnotes23**

“Remote project teams sometimes work with a time difference that can distort communication exchanges”

Vincent Godot, PMO ESSILOR

In the twenty-first century, many business and agency employees collaborate remotely without having to travel. Cost savings are high, but the lack of physical proximity for direct exchange of ideas and information among individuals can have a severe impact on teams. For example, a 2017 Harvard Business Review study revealed that distributed teams are subject to larger negative effects than on-site colleagues in several areas, including project costs, deadlines, team morale, productivity, retention, and stress¹. Some teams on large programs even lack organizational links among their members, who may work for multiple different enterprises on a virtual team.

When project teams are geographically dispersed, several co-ordination and communication challenges can put programs and major projects at risk. Project teams dispersed across continents and cultures often function poorly and sometimes break down completely. In a study of 70 of virtual teams published in MIT's Sloan Management Review, one-third were failures (and only 18 percent « highly successful »)².

In such circumstances, knowing how to communicate differently and how to manage teams virtually become key factors for success.

This reality has caused major changes in how programs and project teams are managed. How has management responded in recent years to these new issues of information exchange and collaboration? How do program and project portfolio managers create cohesion on teams when many members have not met and rarely see each other, even virtually?

This white paper explores how today's distributed teams work most effectively. We will probe how to ensure the smooth flow of information and its accessibility to all, and we will examine how to leverage new information and communication technologies for project or program success.

From there, we will explain how to take the initiative in leading far-flung teams, and how to efficiently respond when following up on team issues. We will explore different ways of encouraging collaboration and cohesion among remote team members, and identify eight factors (out of 100+ studied), that correlate with collaborative success (see Part 5)³.

We will also see how all stakeholders can share knowledge and capitalize on it. And finally, we will show how your scattered teams can develop « collaborative intelligence » (see Figure 1) – a distributed system in which people scattered far and wide can nevertheless each make their unique contributions to a network for solving business problems⁴.

1. Distributed projects & programs: the new normal

Twenty-first century companies have increasingly configured their work and organizational structures to enable remote management of distributed teams.

As Hinds & Kiesler note in *Distributed Work*, remote teams have been defined as a group of people who work together to achieve a common goal, but whose spatial, temporal, cultural and organizational boundaries differ⁵. Performing projects using distributed teams under remote project management can dramatically change how projects are controlled, led, organized, and planned⁶.

1.1. The Need to Bridge Place, Time, and Other Distances

Regular meetings and reviews can be challenging for teams working in multiple, dispersed locations. *"Remote project teams sometimes work with a time difference,"* observed Vincent Godot, the PMO manager for multinational ophthalmic corporation Essilor, in a recent interview. *"That can distort communication exchanges."*

A study of distributed working teams by Cramton & Webber showed that interactions and coordination among remote members on software development teams decreased and, as a result, collective performance was lower⁷. This is also true when it comes to managing complex projects.

To help overcome teams' lack of physical proximity and ensure productivity, organizations develop new modes of communication and collaboration. Geographical distance can be partly resolved thanks to a plethora of communication tools, so that geographically dispersed people can collaborate effectively using tools like document and content management, instant messaging, groupware, email, shared agendas, audio and videoconferencing, and more.

"Remote project teams sometimes work with a time difference that can distort communication exchanges"

Vincent Godot, PMO - ESSILOR

However, program and project teams at different sites encounter, not only a physical gap, but a psychological gap. Team members from multiple cultures will often operate in disparate modes and have different expectations of colleagues. This can bring about discrepancies in their work output.

1.2. The Importance of Creating a Stronger Managerial Framework

According to David MacLeod and Nina Clarke, advisors to the UK government and authors of a report on employee engagement in Britain, a committed employee does not want to be considered as just another resource, but as an important part of the organization⁸. This is even more true when it comes to complex, multicultural teams.

Physical, psychological, and cultural distance can degrade mutual understanding between team members. To support shared understanding requires strengthening of the managerial framework. Like a modular geodesic structure, a strong, new managerial framework can hold together multiple teams across different cultures. This managerial framework should ensure that the organization's actions are consistent with the organization's values to encourage each and every member's engagement.

The more complex a project or program, spanning different geographies and cultures, the more imperative it becomes to create a new managerial framework in which managers treat their team members as individuals and inspire as well as coach and stretch them in their daily work.

1.3. The Four Pillars of Success of a Distributed Team

According to MacLeod & Clarke (see Figure 1), four factors are key for a distributed team to function effectively:

- Abundant communication that enables employees to understand the value of their work in the overall strategy;
- Management that encourages and rewards, which gets the best from each team member;
- Space for dialogue and discussion necessary to feel integrated; and lastly;
- Coherence between the mission fixed by the company and the directions regularly given to employees (e.g., daily and weekly).



FIGURE 1. Four Factors of Success of a Distributed Team

2. How scattering teams geographically impacts project management

2.1. Enabling collaborative Project Management with More Autonomy and Flexibility

Companies or communities that have set up a system of remote work often feature both more flexibility than centralized organizations, as well as more autonomy for members of remote teams. However, reduced program and project control can hamper performance. The roles of each team member should be clearly defined by the same management that evaluates work according to the outcomes to be achieved.

Project sponsors should also promote and fund collaborative project portfolio management technologies, and ensure that they are well understood and mastered by all the members of the team. With «virtual» teams, new application requirements for collaborative project portfolio management tools often emerge.

New, more collaborative solutions are needed to simplify and structure the collection, retrieval, and sharing of information.

Project management organizations like PMOs should seek solutions that will ease team cohesion by unifying communication and collaborative work.

3. Methods and tools for better collaboration on distributed teams

3.1. The Implementation of a Project Methodology

Established, internal program and project management processes are not necessarily meant to support team collaboration. Often they focus instead on scheduling techniques, monitoring progress, and costs. Improving collaboration of distributed teams merits at least as much focus, and moreover it can positively affect plans and budgets.

Elements of a methodology that will support remote teams' collaboration can take many forms. They can include an agreed protocol for decision making; defined workflows for promoting deliverables; clear, shared terminology; and more. The cohesion of a remote team depends on consistency in the organization's use of the methodology. Applying a project methodology can avoid lapses in communication, prevent «bad surprise,» and make the decision-making process more efficient.

Meetings at regular, appropriate intervals are also an important element. These may be the daily stand-ups common on agile teams – but these may not be in «the morning» because morning for some may be afternoon or even evening for others. Meetings need not be daily stand-ups, and lengthy, unnecessary meetings are to be avoided. Short meetings once or twice a week might be more suitable – and they need not be at the same hour of the clock each time; for example, this week may be one region's turn for an inconvenient 7:00 p.m. teleconference, and next week may be another region's turn for an equally inconvenient 7:30 a.m. call.

The elements of the remote team's project management methodology should be established at the outset of a project, with appropriate tool support.

3.2. Embed Use of the Latest information Technology in Team Activities

Information technology (IT) can speed sharing of project data, facilitate skill sharing, and even help develop esprit de corps among members. With IT, project team members can be better informed and increasingly involved in managing their own priorities. Using a collaborative project portfolio management application, project stakeholders working remotely can easily monitor the progress of each project and intervene to address problems or delays.

Moreover, IT can give remote teams and more autonomy, so that project collaboration tools can change how work is organized. With more distributed structures, project sponsors or managers can implement faster, more collaborative and adaptive decision-making.

For such collaborative project management, most teams, companies, and agencies will prefer a Web-based platform. The preferred functionality suite generally features project dashboards, portfolio dashboards, kanban activity monitoring, planning and scheduling, alerts, document management and sharing, and email⁹.

However, tools like email can also disrupt the behavior of project stakeholders and project teams.

Previously, management of projects featured many informal exchanges, in hallways and around coffee machines and water coolers. With distributed teams, organizations risk becoming over-reliant on writing the information they exchange – but written communication can quickly become problematic.

Not only can essential information get lost in the heap of hundreds of emails received daily by a project manager. Worse, asynchronous written communication is more susceptible to misunderstanding. When meeting in person, team members can sense uncertainty from tone of voice or body language, and can request or give clarification in real time.

Not so with written communication. Most people do not write clearly, and many do not read with full attention or comprehension. As a result, effective methodologies often recommend or require that a real-time, spoken conversation accompany any complex information exchange.

4. Approaches to knowledge management and best practice sharing

4.1. Conduct Post-project Analysis

To improve the quality of virtual teams' work and boost their productivity, organizations should continuously capture project knowledge and encourage its use. To enable and encourage performance improvement, systematic analysis of project experiences should be conducted. Collecting and analyzing project results, success factors, failures, risk mitigation, problem resolution and so on will provide more than « lessons learned » if properly quantified, classified, and indexed for future reference.

When projects are completed – i.e., finished and classified – it is important to assess the real impact on the enterprise. Post-project review comes into play, and not just whether a project was « on time » or « on budget, » since these are often moving targets.

Post-project analysis can be considered as a project balance sheet. It consists of evaluating the achieved objectives of a project – the assets, – as well as the costs involved in the implementation of the project – liabilities, including the problems encountered.

Reflection on project successes, challenges, and factors that led to merely partial success or to outright project failure, can yield important insights into, not just projects' results, but into their practices and processes. Identification of what worked or what did not work, followed up by brainstorming on the ideas collected, can quickly provide lessons that can then be further defined and prepared into a future action plan.

4.2. Capture and Disseminate Know-how

The disciplines of effective program and project portfolio management extend beyond individual projects to include practices that effectively accumulate knowledge from project to project, and that can transform that knowledge into action. «Knowledge management» does not only consist of acquiring and

validating knowledge, but also includes circulating it so that team members can work their best.

When knowledge work is performed by distributed teams, however, knowledge management faces special new challenges. Managing teams' information exchange, and capturing experience as sharable and usable knowledge, are difficult enough for co-located organizations that share social and cultural idioms and working hours.

When team members are widely dispersed, capturing key project information and usable knowledge requires assigned resources with specialized skills. They must have proven competencies to identify, formalize and organize teams' experience and acquired knowledge. Sharing the knowledge in usable form further requires effective mechanisms for circulating knowledge, and training of staff in how to discover knowledge previously gained.

5. From scattered teams to collaborative intelligence

In an information economy, enterprise performance depends critically on its stakeholders' collective knowledge and intelligence – and increasingly on the quality of distributed teams' collaboration to mobilize that knowledge.

As we have seen, deployment of teams' knowledge and intelligence is enhanced by effective tools and techniques for collaboration and knowledge sharing across time and distance.

With collaborative tools, distance among team members need not hinder the cohesion of teams and the development of a team spirit. Collaborative tools, however, are not enough. Temporal, organizational, socio-cultural, technological and other criteria besides geographical distance must also be taken into account.

In « Eight Ways to Build Collaborative Teams » Lynda Gratton and Tamara J. Erickson examined 55 large, complex, and highly collaborative teams and statistically analyzed more than 100 factors that might contribute to collaboration. From those 100+ factors, they found eight that correlated with success in overcoming problems of long-distance communication, team size, diversity, and specialization (see Figure 1 on page 8)¹⁰.

- 1. « Signature » Investments.** Management can encourage collaborative behavior via very visible investments showing their commitment to collaboration (e.g., in facilities with open floor plans for better communication).
- 2. Behavior Modeling.** In enterprises where senior executives show highly collaborative behavior themselves, teams collaborate well.
- 3. A « Gift » Culture.** Encouraging managers to give the « gift » of mentoring and coaching—especially on an informal basis— helps people build personal networks, which are often key to working across corporate boundaries.
- 4. Teach Vital Skills.** Human resource departments or other organizational units can positively affect team collaboration by actively teaching managers and staff how to build relationships, communicate well, and resolve conflicts creatively.
- 5. A Strong Sense of Community.** People are more likely to both reach out for help and to share knowledge when they feel a sense of community.
- 6. Team Leaders Who Are Both Task- and Relationship-oriented.** Rather than debate whether a task or a relationship orientation creates better leadership, recognize that both are key to successful team leadership. Usually, emphasizing task orientation early in a project, and then shifting toward a relationship orientation when work is well underway, works best.
- 7. Build on Heritage Relationships.** People are reluctant to share knowledge and less comfortable collaborating when too many team members are strangers. A best practice is to appoint a few people (at least) who know one another to the team.
- 8. Role Clarity and Task Ambiguity.** Cooperation grows when team members' roles are sharply defined yet the team has latitude on how to complete its work.

FIGURE 2. Eight Factors to Build a Collaborative Team Culture

SOURCE: HARVARD BUSINESS REVIEW, NOVEMBER 2007, Lynda Gratton and Tamara J. Erickson

On individual projects, often teams are assembled reactively, and over time, organizations gradually gravitate toward remote work reactively, often almost randomly. However, executives and managers can implement intentional steps both to build a culture of collaborative teams – « collaborative intelligence » – and to promote successful programs and projects. Specifically, six steps – from involving individual members early, to measuring and evaluating project collaboration activities – will enhance team productivity and quality of product deliverables, while contributing to development of collaborative intelligence (see Figure 3).

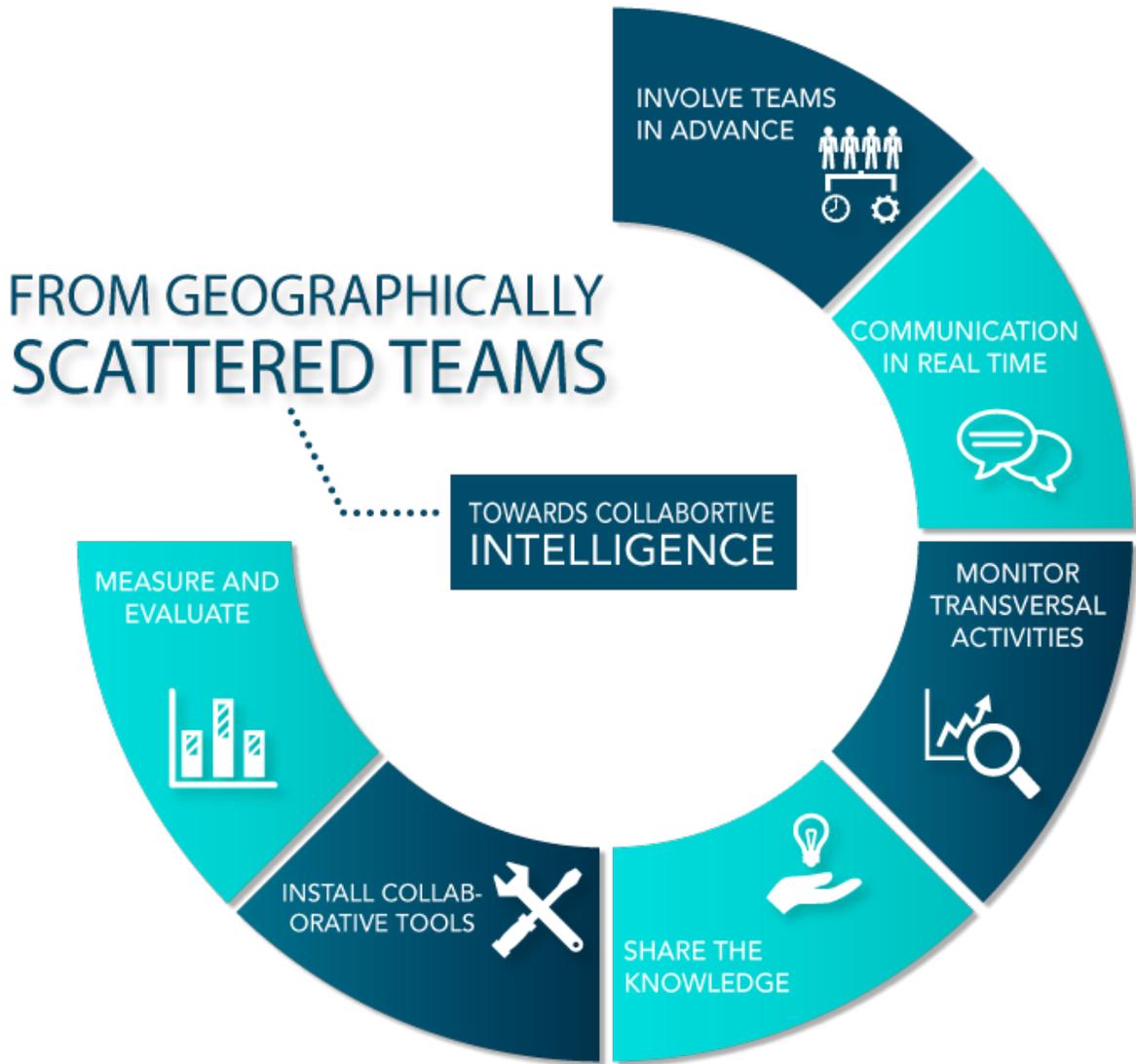


FIGURE 3. Six Steps to Achieve Collaborative Intelligence

5.1. Involve Employees in Advance

The first step in the journey towards collaborative intelligence is team participation in decisions that affect them and their work. As enterprises adopt more agile and lean management techniques, establishing goals and performance targets has become more iterative and co-operative. Involving employees in decision-making encourages dialogue among all levels of scattered teams. This more participative management method helps cultivate a collaborative organization. It enables enterprises to federate participation, facilitating people's involvement and attracting their support of program goals, whatever their level of maturity or role (operational, strategic, funding, clients, etc.), and regardless of their geographical location.

5.2. Communication in Real Time

Technologies like those previously mentioned and others have enabled more real-time communication by distributed teams, but cannot overcome differences in time zones, especially when those differences are four or eight hours or more. As a result, in addition to leveraging collaboration and communication tools, organizations have learned the importance of identifying the most convenient time for an intercontinental team to meet, establishing those standing meetings at set times, and adhering strictly to a meeting schedule.

If no time is convenient, because some team members have nine-to-fifteen hour time differences, then as previously noted it is necessary to share the inconvenience, with one region taking an evening teleconference (e.g. Thursday evening 8:00 p.m.), and then, for the next meeting, the other region taking an early morning call (e.g., Wednesday morning 7:00 a.m.).

Recording calls for absent members to listen to is no substitute for real-time communication, not only because the recordings are seldom listened to, but because they do not involve the immediate exchange of ideas, counter-proposals, debate, and the Q&A of a real meeting.

5.3. Monitor Transversal Activities

For several years now enterprises have sought to adopt more horizontal, or « flatter,» management approaches, both to gain efficiencies and to promote closer communication between management and staff.

Vertical management structures remain, to provide good control of business activities, but enterprises also have more and more projects and product lines that span multiple departments (e.g., commercial, logistical, financial, etc.), with teams based all over the world. This has led many to blend transversal, intersecting vertical and horizontal management practices, which requires higher levels of collaborative intelligence, bringing many important organizational and technical challenges.

To address these challenges, collaborative project portfolio management solutions can help bring stakeholders together on a common platform to bridge the gap between project planning, decision-making and operations. They provide a comprehensive view of the transversal activities of planning, monitoring and analysis. They thus promote both strategically steering programs and operational responsiveness in tracking project costs and delays.

5.4. Share the Knowledge

Companies with high collaborative intelligence are characterized by the collection and sharing of knowledge gained from every project. Unfortunately, very often, the most relevant and valuable information for a project or program is not recorded in any database, but resides only in the minds of past project participants. The inability of most organizations to share properly gathered, digitally archived, and intelligently indexed knowledge means they typically incur a significant opportunity cost. The benefits of collaborating across time, sharing knowledge gained on past projects to improve planning and mitigate risks, are substantial, but those benefits elude organizations incapable of knowledge management.

Collaborative project portfolio management solutions can yield such benefits and others by enabling users to access, modify, and exchange data and knowledge directly in a common online workspace across the organization. Team members and other stakeholders can search, view, and retrieve vital knowledge (and without the inconvenience of having to connect to a local server or download email attachments).

5.5. Install Collaborative Tools

Collaboration of distributed teams is supported by a range of different kinds of tools and technologies. Social networks, video- or teleconferencing, Internet platforms (intranets or Web-based), and others are widely used to help teams work together.

In a virtual enterprise with high collaborative intelligence, collaborative project portfolio management tools are accessible – not only to project managers or to program, portfolio, resource, or other managers – but to all team members. Applications like Planisware Orchestra let all participants create and control their own

project activities, coordinate their work through shared calendars, and communicate in real-time with feedback, alerts, and notifications, while also enabling managers to prioritize, plan, schedule, assemble teams of complementary resources, and monitor cost and progress.

Existing solutions have different modules for each role or specialty. For example, a calendar centralizes important appointments; instant messaging and group chat reduce the amount of e-mail and facilitate quicker communication across the entire team; a wiki or a blog lets teams easily share information. Collaborative project portfolio management solutions are designed so that each completed task can trigger a chain of information to other collaborators.

5.6. Measure and Evaluate

The sixth step, measurement and evaluation taken together, is perhaps the most important in cultivating collaborative intelligence – and the most difficult, in its multidimensional complexity. One dimension is to measure and evaluate projects, not just in budget and schedule terms, and not just in terms of risk mitigation, or their business case, and user or customer satisfaction.

Those and other factors can provide important data for future use. But another dimension is evaluation of that data – such as finding the rationale for changes to project schedules or budgets, or even business cases – and that is where future project managers will find more useful project and/or portfolio knowledge.

Yet another dimension is measurement and evaluation of collaboration practices themselves. To what degree are team members involved in decision-making and goal-setting? Is real-time communication declining, replaced by email and recorded (but seldom listened to) meetings? What is the blend of formal, informal, vertical, and horizontal management practices, and how is that blend changing? How does management set targets for the roles and activities focused on collecting, indexing, and disseminating project knowledge? Is that management function supported by tools? What is the rate of usage of collaborative tools, including the amount of new content, team commentary, and reusable artifacts like templates?

From a human, organizational and technical perspective, these collaborative best practices will help enterprises continuously improve organizational performance. Implementing collaborative best practices, as learned in diverse business situations and from successes and failures past, will deliver the biggest added value when supported by consistent measurement, evaluation – and action.

This white paper began by observing that scattered teams sometimes break down completely, and went on to explore how today's distributed teams work most effectively.

Project management methods and tools have responded to issues of information exchange and collaboration in the ways described in this paper, and in other ways.

Successful and effective managers will not only employ these methods and tools, but will continue to seek new approaches to cultivating collaborative intelligence to better provide high-quality project and program deliverables.

Endnotes

- 1 « A Study of 1,110 Employees Found That Remote Workers Feel Shunned and Left Out, » Joseph Grenny and David Maxfield, Harvard Business Review, November 2, 2017.
- 2 « Building an Effective Global Business Team, » Vijay Govindarajan and Anil K. Gupta, MIT Sloan Management Review, July 15, 2001.
- 3 « Eight Ways to Build Collaborative Teams, » Lynda Gratton and Tamara J. Erickson, Harvard Business Review, November 2007.
- 4 Dialogue: *The Art Of Thinking Together*, William Isaacs, Crown Business Publishers, 1999.
- 5 *Distributed Work*, Pamela J Hinds and Sara Kiesler, The MIT Press, 2002.
- 6 « Bridging Space Over Time: Global Virtual Team Dynamics and Effectiveness, » Martha L. Maznevski and Katherine M. Chudoba, Organization Science, Vol. 11, No. 5, September–October 2000.
- 7 « Relationships Among Geographic Dispersion, Team Processes, and Effectiveness in Software Development Work Teams, » Catherine Durnell Cramton and Sheila Webber, Journal of Business Research Vol. 58, No. 6, February 2005.
- 8 « Engaging for Success: Enhancing Performance Through Employee Engagement: A Report to Government » David MacLeod and Nita Clarke, United Kingdom Office of Public Sector Information, 2009.
- 9 « Techniques and Tools for Project Collaboration, » Matt Light, Gartner Inc., June 2011.
- 10 Op. cit., Gratton and Erickson.



www.planisware.com