

The Stakeholder Management Perspective to increase the Success Rate of Complex Projects

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PROJECTS AND COMPLEXITY

Unicity is a foundational attribute of every project in all Project Management approaches: «each project is unique» (The International Organization for Standardization, 2012), «a project is a temporary endeavor undertaken to create a unique product, service, or result» (Project Management Institute, 2017), «a project is a unique, temporary, multi-disciplinary and organized endeavour to realize agreed deliverables within predefined requirements and constraints» (International Project management Association, 2015). This unicity derives from *non-linear relations* among scope, time, cost, quality, and stakeholders and, then, characterizes each project in terms of a certain level of inherent *complexity*. Additional complexity factors include number of different internal and external organizations involved, sources and complexity of technology required, sources of funding, external or internal customers, degree of customer involvement in the project, levels of risk (Archibald and Archibald, 2016). Therefore, facing projects complexity can be very hard: intrinsic nature of complexity, on the one hand, is dynamic and multidimensional, and its dimensions include scope management, contracting and procurement, leadership, human factors, stakeholders, logic, interfaces, schedule, risks (Pells, 2017), on the other, is characterized by a continuous trend to growth, that is valid, a fortiori, in large and major projects, and when spreading to program and/or portfolio domains.

A model which can be very helpful to face complexity, by supporting effectively decision-making processes, is the well-known *Cynefin Framework*, which have been created, and developed, by Dave Snowden, starting from early 2000s. Cynefin Framework is properly a *Sense-Making Model* based on observation, in which “data precede model”, rather than a theoretical Categorization Model, in which “model precedes data”: it individuates four domains which are characterized by different levels of complexity, *i.e. Simple, Complicated, Complex, and Chaotic*. Cynefin Model can be also applied to projects (Fig. 1), and, then, it can help to manage contexts of different complexities, in which we look for the causes that could lead to the effects of projects successes, as well as for the most effective project management actions to be taken.

The domains of *Simple* and *Complicated* are regarded as *ordered*. In the *Simple* domain, cause and effort relationships exist, are predictable, repeatable, self-evident, and can be determined in advance. The decision model is based on the unique *best practice*, and the most appropriate action path is *sense – categorize – respond*: communication is not present, only information is broadcasted, and the network of relations is irrelevant. Actually, no project belongs to the Simple domain, which is the domain of *operations*. On the other hand, in the *Complicated* domain, cause and effort relationships exist, but are not evident: the right answer requires the use of analytical methods, and the support of experts, and that is where project managers start to come in. The decision model is based either on one of the *good practices*, or on a combination of them, and the most appropriate action path is *sense – analyze – respond*: communication is mainly informative, and the network of relations is important. Complicated domain include all the so-called *traditional*, and a large part of the *agile*, projects: in these

cases, the cause of project success is the fulfillment of *stakeholder requirements* (not always known and evident), which correspond to the accomplishment of project objectives.

The domains of *Complex* and *Chaotic* are regarded as *unordered*. In the *Complex* domain, cause and effort relationships are only obvious in hindsight, i.e. retrospectively, with unpredictable, emergent outcomes. The decision model is based on an *emergent practice*, and the most appropriate action path is *probe – sense – respond*: communication is mainly interactive, and the network of relations is fundamental. Complex domain includes, for example, *value-driven* and *2.0 projects*: in these cases, the cause of project success is the satisfaction of *stakeholder expectations*, in terms of both business value to be delivered, and benefits to be achieved, which corresponds to the accomplishment of project goals. On the other hand, in the *Chaotic* domain, no cause and effort relationships can be determined, and quick actions that are finalized to target more stability are necessary. The decision model is based on a *Novel Practice*, and the most appropriate action path is *act – sense – respond*: also in this domain, communication is mainly interactive, and the network of relations is fundamental. In general, no project belongs to the Chaotic domain, which is the domain of *continuous emergencies*, and of *crisis*. Finally, it is very interesting to consider the peculiar Simple/Chaotic Boundary, since a “*shortcut towards the chaos*” may occur in possible dynamics: i.e., if we oversimplify projects, which, in any case, are either complicated or complex, and we try to manage them as “simple” operations, we will fall very soon, together with our projects, into an unmanageable chaos.

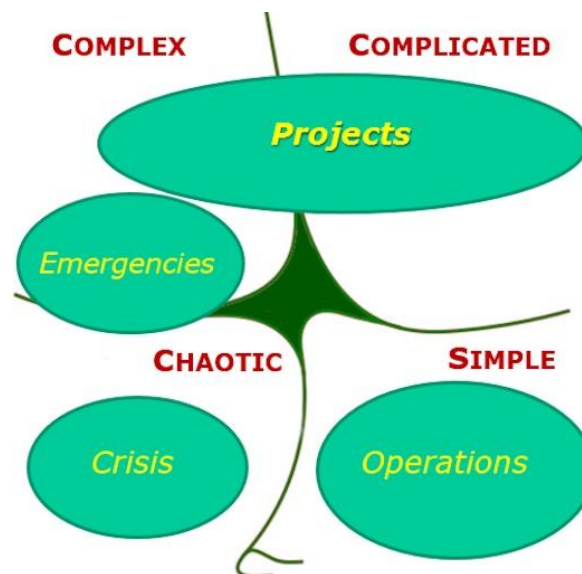


Fig.1 – Projects in Cynefin Framework (elaboration from Cognitive Edge)

Definitively, while in Complicated Projects the success factor is the satisfaction of stakeholder requirements, in Complex Projects the success factor is the satisfaction of both stakeholder requirements and stakeholder expectations: Stakeholder Management processes are, then, key, to achieve project success at various levels of complexity.

THE STAKEHOLDER MANAGEMENT PERSPECTIVE

Stakeholder, who is he? In Project Management, stakeholder is commonly defined as «a person, group or organization that has interests in, or can affect, be affected by, or perceive itself to be affected by, any aspect of the project» (The International Organization for Standardization, 2012). Moreover, since stakeholders are also those that add *value* to the

projects, they have been also defined as «participants in the human process of joint value creation» (Freeman, 1994), and as «individuals and other entities that add value to the organization, or are otherwise interested in, or affected by, the activities of the organization» (The International Organization for Standardization, 2009).

In general, (Pirozzi, 2017), stakeholder relations are the core of project value, because, in each project:

- they are a value, which is fundamental to the existence of the project and to its definition;
- they generate a value, which is incorporated in the project;
- they allow the exchange of value, via the delivery of project results.

Moreover, all the project stakeholders are important: «Project success often depends as much on inside and outside stakeholders as it does on those directly responsible for the effort.» (Archibald and Archibald, 2016). Actually, all the stakeholders are central towards each project (Pirozzi, 2017), because:

- the stakeholders are both the actors, and the beneficiaries, of the project, and
- the stakeholders are the critical success factor of the project, since they are both the realizers of the results, and the validators, at various levels, of their satisfaction in terms of needs and expectations.

Indeed, stakeholders, including the project manager and the project team, are the doers of the project, as well as other stakeholders, including customers, users, and funders, are the target groups of the project itself: business is the domain in which various stakeholders interact to create and exchange value. The relationships among the project stakeholders are, then, real and proper business relationships, which are associated with the generation, and the exchange, of business and/or social value: in general, this flow of value, among the stakeholders, courses through the project with a continuous exchange of resources and results (Fig. 2).



Fig.2 - The Stakeholder Management Perspective

In the Stakeholder Perspective (Pirozzi, 2017), we can assume that invested resources generate deliverables, which have to incorporate a quality that corresponds to the achievement of those project *objectives*, which, in turn, fulfill stakeholder *requirements*: nevertheless, a project will be considered really successful when its *goals* will be achieved, then satisfying

stakeholders, through the perceived quality, not only in terms of their requirements, but also in terms of their *expectations*, which concern the possible, future, attainment, of both their business value and their benefits. Stakeholder satisfaction, instead of being just "a" critical success factor, proves, then, to be *"the" critical success factor*: in fact, projects may not succeed their goals, or may fail at all, for reasons that could be technically very different, but, for sure, every project that is not successful has had at least one key stakeholder whose expectations were not satisfied.

Today, more than 30% of projects «*don't meet their original goals and business intent*» (Project Management Institute, 2017): this means that, despite recent important improvements, which, in any case, are fortunately due to the increase of Project Management Maturity, a significant part of all projects does not still succeed to satisfy the expectations of its stakeholders. Therefore, in today's world, effective Stakeholder Management, in terms of both processes and competences, grows foundational to achieve the project objectives and goals, because it can successfully support the release of that project value which can meet both stakeholder requirements and expectations: this proper value can be generated by ensuring an adequate management of both contents and relations domains, and by paying attention to the dimensions of both *"the delivered"* and *"the perceived"*.

MANAGING VALUE TO SUCCEED IN COMPLICATED AND IN COMPLEX PROJECTS

In *complicated* projects, there is a small gap between meeting the requirements and meeting the expectations of stakeholders (Fig.3), and this happens when:

- the project is *part* of the customer's core business ("supplier perspective", as in internal or in outsourcing projects), and/or project results are product-oriented and/or tangible (e.g. in infrastructure projects) and/or, in any case, stakeholder requirements are either well-defined (as in traditional contexts) or are evolutionary, but, in both cases, all stakeholders cooperate effectively (as in agile contexts);
- the triple constraints are dominant;
- the relations with stakeholders are important and periodic.

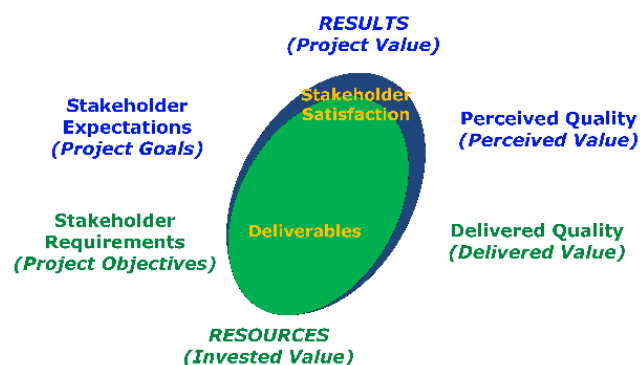


Fig.3 – Stakeholder Management Perspective in Complicated Projects

Since, in complicated projects, the domains of the stakeholder expectations and of the stakeholder requirements substantially overlap, we can assume that success is based on the fulfillment of stakeholder requirements, and that, therefore, managing properly the *delivered value*, whose measures consist, as in classic project management, in cost and in consistency/progression of the deliverables, is necessary and sufficient.

On the other hand, in *complex* projects, there is a significant gap between meeting the stakeholder requirements and meeting the stakeholder expectations (Fig.2), and this happens when:

- the project is a *support* of the customer's core business ("customer perspective", as in most external projects) and/or the project results are service-oriented and/or intangible (e.g. in software projects), and/or stakeholder requirements are not well-defined, or are evolutionary, but not all stakeholders cooperate effectively;
- *competing constraints* are dominant: the importance of value and reputation is superior to that of the triple constraints (Kerzner, 2015);
- relationships with stakeholders are primary and can be continuous, fast, interactive (as in 2.0 world), evolutive (Kerzner, 2015).

Since, in complex projects, expected project goals can be far away from required project objectives, the project success is based on the satisfaction of stakeholder expectations, and, therefore, managing properly the *perceived business value* becomes mandatory. Effective Stakeholder Management has, then, to be value-driven: «Customers pay only for what is of use to them and gives them value» (Drucker, 1985); «Success is not necessarily achieved by completing the project within time, cost, and scope. Success is when the planned business value is achieved within the imposed constraints and assumptions» (Kerzner, 2009). However, successful management of the business value requires adequate metrics and measures, which can be used also during project life cycle, and not only after project completion.

Actually, project life cycle is included in an *investment* life cycle: organizations define strategies, which are based on their own mission, and vision, then select opportunities in accordance with defined strategy, then set business cases up, and, finally, start projects up. Projects are, therefore, means to accomplish strategic goals, by achieving, through their results, the expected benefits: the overall value that is generated by each project determines the stakeholder satisfaction in the whole investment life cycle (Fig.4). During project life cycle, measures of actual cost, and evaluations of the state of progress, are normal, and are normally used as *indicators* to estimate the "present" situation and the "future" time and cost of the project completion; on the other hand, generated business value is, in any case, *future* with respect to project life cycle, and, unfortunately, can be measured only after project completion. Since, during project life cycle, business value measures are not possible, we therefore need the support of other additional indicators that can represent effectively both the project value and the business value: proper *Key Performance Indicators*, or KPIs, (Parmenter, 2015) are, therefore, necessary, to target the success of value-driven (Kerzner, 2009), 2.0 (Kerzner, 2015), and, as previously defined, complex, projects.

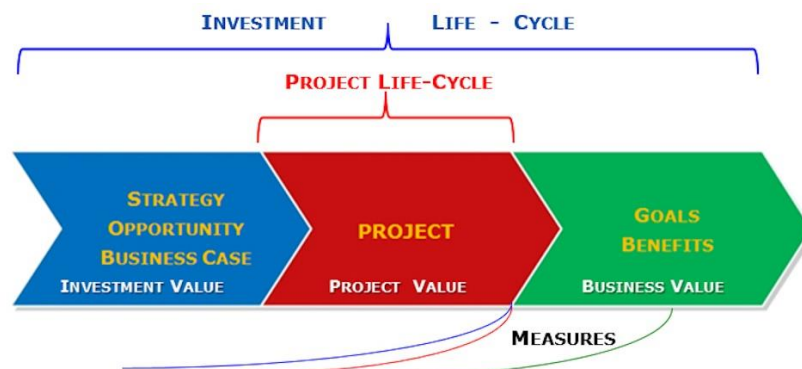


Fig.4 – Project Value Chain

KEY PERFORMANCE INDICATORS TO EVALUATE PROJECT SUCCESS AND VALUE

When managing *major* projects, Key Performance Indicators are part of the necessary multidimensional evaluation of project success and value (Archibald and Archibald, 2016): same consideration can be applied in case of managing *complex* projects, too. In fact, although Key Performance Indicators are fundamental measures of *released* projects/products/services, KPI-based measures and estimations can be also extremely useful to get crucial progress indications about the generated value, and to monitor stakeholder expectations, *during* projects/products/ services *implementation*. However, project stakeholders are different, have a different behavior, which characterize them in communities, and, then, have different expectations (Pirozzi, 2017): stakeholder communities, indeed, target different types of value. *Providers* (project manager, project team, business partners) target a *technical (delivered) value*, which include triple constraints, project objectives, revenues, while *investors* (top management, shareholders, funders...) target an *economic value*, which include costs, revenues, business prospects, and *purchasers* (customers, users) target their *business value*, including customer costs (which, of course, coincide with providers/investors revenues), project goals, expected benefits achievement. Specifically, KPIs should address different types of value, to cover both project management, economic, and business domains.

Project Management KPIs are especially useful to enhance project control, and to maintain and/or modify the proper route towards deliveries that fulfill stakeholder requirements: they are very helpful both in complicated and in complex projects. These KPIs include, for example:

- *Earned Value* (although it is almost never defined as a KPI, it is used in almost all projects, and it is often the only KPI which is used in traditional, classic, or complicated Project Management);
- percentages of completed work packages compared to those planned;
- percentages of work packages that are aligned with budget and/or schedule;
- percentages of critical work packages that are aligned with budget and/or schedule;
- percentages of critical work packages that still have to be completed, and/or percentages of completed milestones;
- quantity and quality of resources that have been allocated compared to planned ones, turnover indices;
- numbers and percentages related to risks, revisions, requests for change, and changes.

Economic KPIs are especially useful to improve relations with top management and funders, and to maintain and/or modify the proper route towards the satisfaction of their economic and financial expectations: their use can be very helpful in complicated projects, and it is basic in complex projects. In any case, since the domain of economic KPIs is very analytical, and very vast, it is preferable to narrow focus on some selected high-level indexes. Economic KPIs include, for example (Marr, 2012):

- *Economic and Financial Indicators*, as Net Profit, Net Profit Margin, Gross Profit Margin, Operating Profit Margin, EBITDA, Revenue Growth Rate, Total Shareholder Return, Economic Value Added, Return on Investment, Return on Capital Employed, Return on Assets, Return on Equity, Debt-to-Equity Ratio, Cash Conversion Cycle, Working Capital Ratio, Operating Expense Ratio, CAPEX to Sales Ratio;
- *Marketing Indicators*, as Market Growth Rate, Market Share, Brand Equity, Cost per Lead, Conversion Rate, Search Engine Rankings and click-through rate, Page Views and Bounce Rate;

- *Customer Relationship Management Indicators*, as Net Promoter Score, Customer Retention Rate, Customer Satisfaction Index, Customer Profitability Score, Customer Lifetime Value, Customer Turnover Rate, Customer Engagement, Customer Complaints;
- *Human Resource Indicators*, as Human Capital Value Added, Revenue Per Employee, Employee Satisfaction Index, Employee Engagement Level, Staff Advocacy Score, Average Employee Tenure, Absenteeism Bradford Factor, 360-Degree Feedback Score, Salary Competitiveness Ratio, Time to Hire, Training Return on Investment;
- *Sustainability Indicators*, as Carbon Footprint, Water Footprint, Energy Consumption, Saving Levels Due to Conservation and Improvement Efforts, Supply Chain Miles, Waste Reduction Rate, Product Recycling Rate.

Business Value KPIs are either common, or specific, for each sector of activity: they are especially useful to improve relations with customers and users, and to maintain and/or modify the proper route towards the satisfaction of their business expectations; their use is foundational in complex projects. The business value KPIs that are common to the different sectors of activity are of primary importance, since they include:

- *measures and percentages of stakeholder satisfaction (in terms of both requirements and expectations);*
- *measures and percentages of stakeholder positive engagement;*
- *measures of perceived value, as perceived business value, social value, quality, reputation, business climate, innovation, sustainability.*

In addition, there are other business value KPIs, as functional and/or quantitative measures, and the relevant percentages of completion/deviation from budget/schedule, which are specific of each sector of activity; some examples of these KPIs are shown below:

- *Web Marketing* (Google Analytics, 2017): measures of audience (number of sessions, users - both new and returning, page views, average session duration, bounce rate, new sessions), location, new vs. returning users, browsers and OS, devices, acquisition (direct traffic, organic search, referral, social media, display advertising, email, paid search), source/medium (search engine/domain, organic/cost-per-click paid search/referral), AdWorks/SEO/Social, behavior (pages, actions, number of page views, bounce rate, exit rate, flow), site content/all pages, landing/exit pages, real-time, in-page analytics;
- *Information Technology* (ITIL, 2011): service indicators for strategy, financial management, business relationship management, service level, capacity, availability, service continuity, information security, supplier management, service design-release-deployment-validation-testing, asset and configuration management, incident and problem management, continual improvement;
- *Sustainable Smart Cities* (International Telecommunication Union, 2015): indices of ICT, environmental sustainability, productivity, quality of life, equity, social inclusion, physical infrastructure, network, knowledge economy, education, openness and public participation, governance, infrastructure connections;
- *Railway Infrastructure* (PRIME, 2017): measures of context, safety/security/environment, performance (punctuality & robustness), delivery (capacity & condition), finance (costs, charging, & revenues), growth (utilization, intermodality, asset capability/ERTMS);

- *Local Public Transportation* (Trans Cooperative Research Program, 2003): measures of availability, service delivery, community, travel time, safety and security, maintenance and construction, cost, capacity;
- *Pharmaceutical Industry* (Roche, 2016): measures relevant to value for patients, for employees, for partners, for communities and environment, for investors.

In Project Management, any measurable value could be effectively used as a KPI, but, if they are too many, the situation can become unworkable: it is, then, important, to make an appropriate selection. While all KPIs have to be in accordance with SMART rule (i.e. specific, measurable, attainable, realistic or relevant, time related), project-oriented KPIs have to be selected also because they have the characteristics of being *predictive, measurable, actionable, relevant, automated, and few in number*: moreover, the best way to share effectively, rapidly, and continuously, KPIs with other stakeholders is using *dashboards* and/or *scorecards*, which replace very efficiently traditional reports (Kerzner, 2015). The use of dashboards, in addition, can bring important benefits in the relations with two specific typologies of *non-positive stakeholders*, as reluctant/indifferent stakeholders, who do not want to be engaged, and negative/hostile stakeholders, who do not want to agree anything: these categories are, unfortunately, quite common in the real world, and especially in complex projects. Actually, the use of KPIs and dashboards can help to deal effectively also with these stakeholders, because KPIs that are shared via dashboards are business-oriented, client-centered, and very stakeholder-friendly: moreover, they require a quick and minimal effort to interact, and, in most cases, they are available so frequently for sharing, that also no-answers can be interpreted positively, as a silent approval.

EFFECTIVE STAKEHOLDER MANAGEMENT INCREASES THE PROJECTS SUCCESS RATE

Stakeholders are central towards the projects, as well as Stakeholder Management processes and competences are central towards the discipline of Project Management: actually, in all the international standards and best practices, stakeholder-related issues grew up to take a primary role on. Indeed, depending on the standard, “stakeholder” is defined as either a primary subject group (The International Organization for Standardization, 2012), or a basic element in the competence area “practice” (International Project Management Association, 2015), while “Project Stakeholder Management” is defined as a main knowledge area (Project Management Institute, 2017). Whatever the approach to project management is, stakeholder management is absolutely *cross-discipline*: it concerns all *relation management* issues, and «Relationship Management is of special importance in today's world» (R.D. Archibald, 2017), but it has a fundamental indirect influence on *delivery management* too, since each project is made by stakeholders to be delivered to other stakeholders.

In complicated projects, stakeholder management supports the generation of that *delivered value*, which leads to project success by achieving project objectives, which, in turn, fulfill stakeholder requirements: therefore, stakeholder management has to be focused on those stakeholders who are involved in the *implementation* of the project, such as the project team, and its basic guidelines can be the development of awareness, leadership, teaming, motivation, and ethics (Pirozzi, 2017), to increase deliverable effectiveness and project efficiency.

In complex projects, in addition to the above, stakeholder management supports the generation of that *perceived business value*, which leads to project success by achieving those project goals, which, in turn, fulfill stakeholder expectations: stakeholder management must, then, be

primarily focused also on those stakeholders who *direct* the project, such as customers/users, sponsor/top management, and funders, and its basic guideline is the development of an effective communication, to add value to the project and to improve project effectiveness.

In all cases, Key Performance Indicators are necessary, powerful, and effective means, to manage both delivered and perceived value: proper KPIs can be, therefore, selected, agreed, measured/estimated, shared with stakeholders via dashboards, and used to confirm/readdress, in terms of both deliverables and stakeholder satisfaction, the action of the project team during the entire project life cycle. In this way, an effective stakeholder management, which uses properly KPIs and dashboards, can increase the success rate of complex projects, by supporting both the value generation, and the project goals achievement.

Definitively, in all projects, but specifically in complex projects, the Stakeholder Management Perspective is a powerful, and effective, set of processes and competences, that helps both the project manager, and the project team, to remain constantly aligned with both stakeholder requirements and expectations, in order to target continuously the achievement of both project objectives and goals, so increasing the overall project success rate.

WHAT ABOUT INCREASING THE SUCCESS RATE OF PROGRAMS AND PORTFOLIOS?

Certainly, all programs and portfolios are *stakeholder-centered* too, as well as all projects are, although, generally, programs and portfolios stakeholder domains are characterized by higher multilevel complexities. In fact, program stakeholder domain is the union of different related projects and activities stakeholder domains, while portfolio stakeholder domain is the union of different, related or unrelated, programs, projects and activities stakeholder domains: therefore, *all programs, and all portfolios, are complex*. Furthermore, since program management, portfolio management, and their guidance, address both strategic and operational issues, they target, a fortiori, the business value, as well as complex project management does, and they all consider as prime several additional aspects related to stakeholders. Specifically:

- program management considers of primary importance stakeholder needs, expectations, views, perspectives, and benefits (The International Organization for Standardization, 2017);
- portfolio management considers of primary importance stakeholder needs, expectations, and priorities (The International Organization for Standardization, 2015);
- project, program, and portfolio governance considers of primary importance stakeholder expectations, value, interests, rights, regulatory context, risk tolerances and policies (The International Organization for Standardization, 2017).

Stakeholder management perspective, then, seems to be a valid support to achieve success also in programs and in portfolios, which are all complex... but maybe this could be a deepening for next time.

«There is no question that activities such as project decision making and stakeholder management are essential to the success of the project» (Kerzner, 2015).

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