

**Developing competitive
systems**

Executive Brief

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Value-driven Project Delivery

Six keys to Project Success

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Executive Summary

How do we make project success more predictable? Few things are more critical to the success of a company than its project successes. Currently, studies focusing on construction efficiency, in contrast to productivity, have documented 25 to 50 percent waste in coordinating labor and in managing, moving, and installing materials (Tulacz and Armistead, 2007); losses of \$15.6 billion per year due to the lack of interoperability (NIST, 2004); and transactional costs of \$4 billion to \$12 billion per year to resolve disputes and claims associated with construction projects (FFC, 2007).

A successful project delivers value to its clients and revenue to the business that creates it. But to ensure value and revenue, project teams must arrive at a common understanding of an Owner's goals and responsibilities and the value drivers for that Owner. To develop a project that delivers value in relation to the cost of design and delivery, project teams must also understand the value of different information sets that provide the desired group of financial, social and cultural features of the project.

Communication and social interaction often pose obstacles to achieving the desired levels of performance. Owners, Designers, Builders, Agency Reviewers, Financiers and others filter communication from their professional and personal perspectives. While all of these are legitimate perceptions, a collaborative team needs a new language of collaboration and trust to achieve the greatest value for all concerned. When a common language of understanding is derived and maintained, communication is enhanced, performance is higher and the result is more value.

Value-driven project delivery is a repeatable process based on industry best practices that uses subjective and objective criteria to measure performance and deliver successful projects. It is a hybrid of performance-based delivery with documented problem solving methods that extracts and preserves the understanding of the goals for a project, the possibilities for solutions and the preservation of dignity and respect for all parties. This paper explains how assessment, alignment, achievability, accessibility, agility and accountability, the six key concepts of value-driven project delivery, can be applied to create a repeatable process for developing successful projects.

Highlights

Defining goals, relationships and risks assess the potential path to success for effective project delivery.

Six keys to being value-driven

Assessment

Clearly understanding the needs and requirements of clients is critical to delivering successful projects. The first step is to determine what the goals for the project will be. A thorough investigation of all the shared aspirations of the team members and stakeholders need to be documented. These aspirations should then be categorized into segments with similar requirements. The next step is to analyze the value that the various segments contribute to the overall project success.

Stakeholders for projects include owners, users, vendors, trades and design disciplines, maintenance, operations and capital asset management should be consulted for input, such as requests for functional design requirements, enhanced data relating to installation requirements, material availability, operation and warranty data, sustainability goals to help better define the project targets.

Wherever possible, this information should be converted into metrics that will answer questions such as:

- *Who is asking for this particular information or activity?*
- *How much impact will not having this information be?*
- *What is the potential risk reduction these services provide?*
- *What kind of increased efficiency will this service or technique deliver?*
- *How does this request support the Project Goals and Objectives?*

As you define potential goals and service relationships, quantify the benefits to the client, such as improvements in the performance of the client's own products or services, and cost and time savings. Then look at the value each potential service can provide to your business in the form of revenues, profits, increased efficiencies, reduced errors and resulting market share among others. The importance of increasing the efficiency of all participants is more important than activities that enhance only one or a few participants. Where the same activity delivers value to multiple parties you leverage effort to create greater overall value to the project.

Finally, quantify the risks involved in each potential initiative. Risk factors to be considered include effects on design, economic effectiveness, time, technological viability, and environmental impacts. These risks should also be presented in a scorecard used to assess their acceptability to the team members.

Assessment begins the process of defining the requirements of a project. Clear communication between all the parties is required for success. A process known as dialog mapping focuses conversations toward consensus during the entire delivery cycle. Open conversations pointed toward solutions reveals the differences in language and meaning different stakeholders bring to a project. Dialog mapping reveals those differences and replaces assumption with clarity allowing more efficient, clear communication between stakeholders.

Highlights

Alignment of objectives creates the greatest factor for creating value in any project. Alignment of goals produces efficiency and value with the least effort.



“When you listen to someone else...the common pool is created, where people begin suspending their own opinions and listening to other people's...at some point people begin recognizing that this common pool is more important than their separate pools.”

David Bohm, Physicist and
Philosopher

Alignment

Alignment as a function of aligning project objectives between the parties with the overall goals for the project. Alignment of objectives is a key factor to providing effective delivery in any project effort. Peter Drucker is quoted “There is no loss to the customer by eliminating activities that do not add value.” Therefore, all activities in the project should be aligned to creating value to the project.

Agile management theory has a major tenant that all work scheduled should be aligned to creating the greatest value in the moment for the project given adequate information to determine the work. This alignment of information, resources and agreement is the foundation of efficient project delivery. Establishing these goals provides an effective tool for communication across the boundaries of all the stakeholders in the project delivery.

Where goals are aligned with delivering the greatest value to the project during the entire project duration, all participants realize the greatest potential for profit and positive return on investments. These goals become the central tenants of communication through all participating organizations. Understanding these mutual goals will allow all the participants to better prioritize their time and other resources. Now every team member can focus on delivering value through their activities which contribute most to the value needed at any given point in time, eliminating those activities that do not add value.

Highlights

Continuous delivery of the highest value elements of a project on time is the most effective strategy to achieve project goals.



I have no special talent. I am only passionately curious.

[Albert Einstein](#)

Achievability

From the time a project is first considered until it is delivered, its achievability should be continually evaluated against the goals for the project, and team participants capabilities. Planning aimed at developing delivery mechanisms that achieve the highest value at the moment of need creates the most effective model of project delivery. As new elements of a project are needed for a project they should be evaluated against team resources and capabilities. For the best solutions evaluate multiple mixes of initiatives to determine which one provides the maximum value to the project.

Human and financial resources should be focused on those ideas that deliver the most value to the Owner and the team. It is important to continually evaluate whether or not the work can be delivered within the right time frame and the right cost. Modeling time, resources, logistics and cash availability in concert with the physical models is required to determine the right mix.

Achievability is a mix of both capability and proper planning to deliver the highest value elements at the right time.

Highlights

Bringing information from design, engineering, construction and fabrication together in a single repository provides all members of the team with the information they need.



Accessibility

Making information accessible to everyone involved with the project lifecycle is critical to value-driven project management. Too often, each group involved in the initiative creates their own repository of information that is hidden from other participants.

An information portal for the product team can provide a single source for work completed. The portal should provide the ability to view the entire project portfolio, from graphic to written and multi-media file formats. Role-based dashboards can enable all stakeholders to view progress and comment on proposals and work-in-progress.

Bringing information together in an ideal project portal should increase visibility of requirements, goals, cost data, design performance and other project related information. Logistical analysis can show the tradeoffs between different design or construction options.

By having all information in a central location the collection, delivery and review of information is expedited. Each participant can review and contribute information and be assured that others will have access to their contributions without having to spend time with email distribution or difficult software interfaces.

Highlights

The most successful companies are usually those that can react quickly to change and chaos by focusing on activities that produce the greatest value.



Agility

Agility is expressed in more than terms of organizational flexibility, in the Architecture, Engineering Construction and Operations vertical market segment. Each of these vertical professional efforts traditionally have operated in their own silo of influence. It is rare for these professional segments to overlap as an integrated delivery platform. Our heritage of project delivery has not changed for over 200 years. Since we share a common legal heritage with England our common law-based system is largely unchanged. An adversarial relationship is the basis of common law contract law. this common heritage continues to persist in every phase and part of the delivery process for buildings and infrastructure projects. To make any advances in this business we have to get all the parties out of their silos and bunkers and out on a field of interaction.

That segmentation has led to significant waste in time, material and results in additional project cost. Both the construction and design communities have been trying to find new management methods to bring efficiencies to their respective professions. Agility has recently been expressed in the design effort as flexible, chaos management based on Scrum or Agile management methods. In the Construction industry a page has been borrowed from the management practice of the manufacturing world and repurposed lean manufacturing into Lean Construction.

While both management practices are based on the same theory of flexibility, team solutions and creating the greatest value within a time frame the resulting efforts are largely the same with more flexibility in work scheduling and less risk in performing work that is incorrect. Inherent in both of these efforts is a continuous quality loop that stresses quality assurance with each unit of work that is produced. A concept of Task/Test is a foundational concept.

Highlights

Clarity in communication and commitment to common values result in accountability, which is a foundation for success.



Accountability

Collaborative teams are built on the premise that the members are all willing to accept responsibility for their own actions. Without accountability there is little, if any chance that the effort will be value-driven. Using continual work testing against agreed upon standards provides a significant basis for consistent value delivery.

The premise of both Agile and Lean theories is based on that effort, quality, time and budget are all elements of every work effort. By naming the standards and expectations for each work effort and how it fits with the adjacent work elements will determine the highest possible value delivered. The importance of getting the high-value work in place overrides the traditional work division methods of the past. Now the entire team is responsible for delivering the work effort in the most efficient manner possible.

Without clear objectives and commitment to achieving these objectives successful delivery is unlikely, but where there is consistent language that supports the objectives and available data to support decision-making, successful results are much more likely.

The greatest successes are built on two bridge buttresses: cooperation and reliable data spanned by action.

Highlights

Value-driven projects do not just happen, they are intentional. The benefits are not accidental they are planned. The work is not haphazard, it is focused on value and quality.

Benefits of Value-Driven Projects

Many have questioned the validity of value-driven projects built around collaboration. After all many of us have been working very closely with other professions and disciplines for quite some time. The results of these efforts have largely been hit-and-miss. Often these efforts were hardly organized or had any expressed objectives, goals or open discussion about the responsibilities of the participants.

True value-driven efforts have several distinctive attributes.

1. A complete team is brought together for a declared purpose.
2. Goals and objectives are mutually agreed upon which become the 'ground stakes' which govern further decisions.
3. Incentives are derived to reward those who uphold the objectives of the project and move collaboration forward for themselves and others around them.
4. Risk is shared by those who have the ability to bear and influence it.
5. Decisions are made by those who have the best experience and information, not just because it is the traditional way.
6. Focus on the productivity of a team as a whole rather than transactional activities of individuals.
7. The elimination of waste and corrective work are always high priorities achieved through multi-disciplinary planning and investigation.
8. Technology is a tool for progress not a crutch for excuses and failure.
9. Information is the basis of decision-making. Information is shared by the entire team. Each party has a vested interest to create, share and use highly available information created by the team members

Highlights

Agile/Lean management methods extract the greatest value and eliminate the most waste possible in any complex building delivery effort.

Conclusion

This paper has explained the concept of value-driven project delivery and how it can help you create successful projects. With value-driven project delivery, you:

- Declare the staged Goals and Objectives of each project.
- Build a team based on consensus and collaboration.
- Share both risk and reward equitably.
- Capture information and make it accessible to the entire delivery team.
- Maintain the agility to rapidly adapt to changing circumstances.
- Maintain transparency in tracking and accounting for the results of every initiative.

With these best practices, you can deliver projects that deliver the highest value to owners and users of the built environment.

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