

**Project Management: Managing a Performance Network of Agreements and Deliverables -
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ABSTRACT

Traditional project management tools, including process mapping and workflow design – are useful design tools, and can support the definition of specific activities or routines that constitute portions of a project. But they are not performance tools useful for the people who will do the work to fulfill project objectives. A closer look at activity-based management tools shows that their emphasis on doing work, instead of delivering work products, skews attention toward being busy rather than toward planning and producing the products, services, and communications that constitute success for the project.

Project management tools are seldom useful to either the people who do the work, or to those attempting to coordinate efforts among sub-teams while satisfying multiple customers. They are useful to designers and planners, displaying intersecting activities that can be streamlined and scheduled to create efficiencies. Using a network approach to Project Management, however, will make deliverables and sub-deliverables visible and accessible for discussion, planning, and agreement on the particulars of features and functions.

The evolution of a “deliverable-network” approach to project management supports the management of agreements and results ahead of tasks and activities. The challenge for today’s Project Managers is to design, implement, and synchronize a network of performance agreements that will achieve project objectives. The intention is to re-frame projects in a way that will deal effectively with “scope creep”, project communications, change management, and status reporting. A list of the “top ten tips” shows how to conserve a Project Manager’s time, talent, and temper by managing a project as a performance network.

INTRODUCTION

Activity-based management tools put the manager’s attention on “doing” – the tasks, activities performed by people and their resources for doing the job. They do not reliably provide people who are doing the work with a clear line of sight to the bigger picture of project success, in that they do not provide a capability for establishing agreements between producers and users to support clear understanding of Sender outputs that will also be User inputs.

Differentiating between “work” as doing and “work product” as the deliverable that moves from Sender to Receiver allows a method for displaying the network of agreements that serves as the performance structure for a project. A simple diagram, using only boxes and arrows, is sufficient to describe this network of deliverables and create a Work-Product Map that is directly useful to people working on any portion of the project, and to the user-customers as well.

The Work-Product Map also supports the Project Manager in putting attention on managing agreements rather than managing people, and managing the sub-deliverables throughout the

performance network instead of managing tasks and activities. Ten tips for Project Managers include how to create and use the Work-Product Map to support communication and management of complex projects.

ACTIVITY-BASED MANAGEMENT TOOLS

Process Mapping

An emphasis on activity, including descriptions of procedures and methods, is the predominant characteristic of a “process”. Formally defined, a process is a systematic series of actions that is directed to achieve some end. All definitions focus on *doing* something: a process is a “series of actions”, “sequence of changes”, or “set of activities”. There are ingredients other than activities included in the description of specific processes – roles and responsibilities, tools and equipment, measures and reviews, for example – but the intended end to be achieved is defined as an “output” rather than a result, and is sent off to destinations separate from (and often unknown to) the process performance team.

Figure 1 shows a summary diagram in which the entire process map, i.e., the series of actions or steps, is contained within a box labeled “process”. Inputs and resources enter the process to ensure its operation; rules and requirements shape the operation of the process; outputs exit the process. Process inputs and outputs, the non-activity parts of a process description, are often described in sterile terms such as:

- Input: Items required to perform the process or procedure; and
- Output: Items that are created (artifacts) as part of the process or procedure.

Even the most thorough itemization of process activities and steps does not tell us where these outputs go or who uses them, and no feedback is available from outside the process box to support improvement in the quality or effectiveness of either processing or outputs.

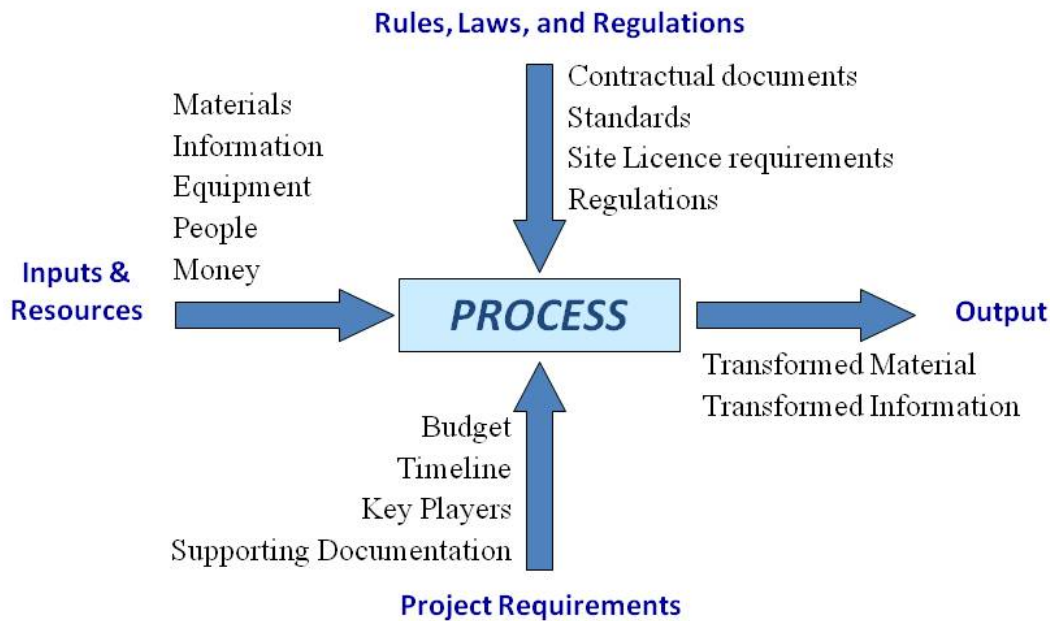


Figure 1. Process: Process box = Sequence of Activities. Arrows = Direction of Outputs

There is much encouragement for Project Managers to “map their processes”, using steps such as:

1. Identify current activities or process steps;
2. Arrange them into a logical sequence, i.e., a “process” or flow of activities;
3. Within each process, clarify the purpose and scope of the process, identify the work to be done, how it will be performed, and who will do each task; and
4. For each process, identify necessary resources and requirements, measures and risks, and, of course, the inputs and outputs.

Several benefits of process mapping are indisputable. Spelling out action steps to accomplish a routine or reliably repeatable function is likely to improve the efficiency of that function, simply by virtue of reconsidering the actions and their sequencing. Similarly, process mapping is likely to provide the basis for training and improving skill sets of the people who will perform parts or all of the action sequence. If the process is organization-wide or includes multiple divisions or departments, such as those for procurement, financial reporting, or inventory management, process mapping can standardize activities, forms, and relevant communications across many different groups. These efficiencies should be expected to reduce costs in work, training, quality, and communication.

Process mapping does not, however, give the people performing the work a clear idea of the way their work connects to related operations and processes being performed by other individuals, departments, and agencies, including those that rely on their own process “outputs”. For the “Doers” who perform process tasks and activities, including making decisions and developing documentation, a process map is often not a handy reference.

Workflow Design

Workflows are another method to represent processes that produce physical outcomes, provide services, or process information and, like process maps, consist of connected steps depicting a reliably repeatable sequence of activities and decisions. A workflow’s operations are the work of a person, group, or mechanism with well defined roles, utilizing specified resources. The flow often refers to a document that is being transferred from one step to another.

Workflow design, like process mapping, provides benefits that include the opportunity to improve efficiency, simplify skill training and decision making, and standardize recurring work functions across divisions or departments. Also like process mapping, workflow design is activity-focused, simplifying actions and decisions in a sequence that can be easily documented and delegated.

Figure 2 shows a simple workflow diagram. The boxes represent activities, and there are no apparent deliverables, so the message is “do this, then do that” or “if yes, do this, and if no, do that”. Like process mapping, there is no user-customer to provide feedback on either processing or deliverables, but the feedback is not needed as there is no “output” from this workflow.

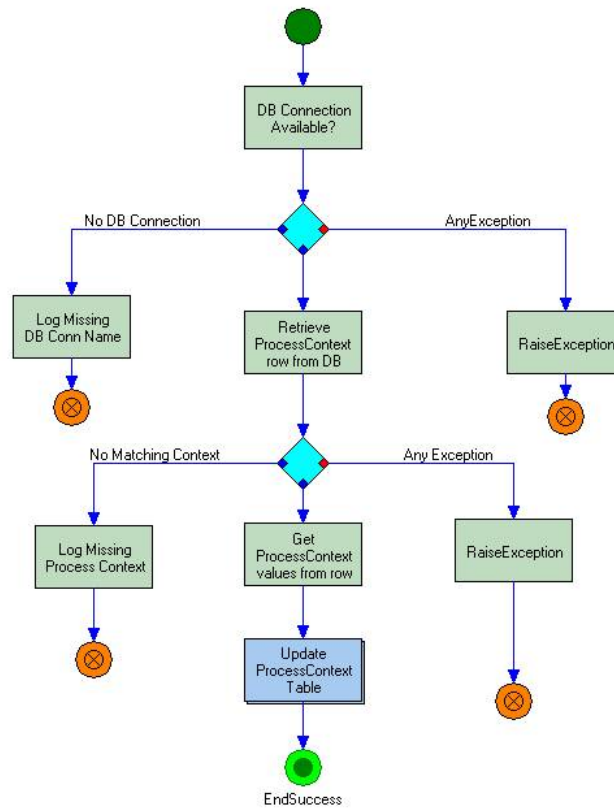


Figure 2. Workflow: Boxes = Activity, Arrows = Sequence of Activities

Shortcomings of Activity-Focused Project Management Tools

Activity-focused management tools, including MSProject, process mapping, Gantt charts, Work Breakdown Structures, PERT charts, and the Critical Path Method, emphasize the arrangement and scheduling of activities, steps, and procedures. This puts “doing” in the foreground of interest and examination, mostly leaving the results out of the equation. These methods and their components seldom fully account for the deliverable “work products” that are the outputs of their mapped, sequenced, and scheduled activities.

1. Project Scope Statement: Does the documented description of the project output, approach, and content always include specifics for the project deliverables and sub-deliverables that are required to achieve project objectives?
2. Work Breakdown Structure: Does the description of a project’s “deliverable-oriented groupings” that organize and define the total scope of the project identify which groups are the Senders and Receivers of the project deliverables and sub-deliverables, and include agreed-upon specifications for those deliverables?
3. Resource Plan: Does the description of major resources needed to proceed with the execution of the project reliably include the specifics of who has, or can authorize

delivery of, those resources to the performers who need them, as well as the agreements for resource delivery quantities, qualities, and timeliness?

4. Project Schedule: Does the Gantt chart of milestones, task dependencies, task durations, work product delivery dates, quality milestones, configuration management milestones, and action items effectively address the agreements for deliverable attributes and due dates as agreed between the Senders and Receivers of the deliverables?
5. Configuration Management Plan: Does the change management methodology for identifying and controlling the functional and physical design characteristics of project deliverables reliably address changes in other portions of the network of agreements that will be necessitated by any changes in local deliverable characteristics or timelines?

So what's wrong with focusing on "doing"? From the perspective of the need to identify the necessary tasks and plan the work schedules, there is nothing wrong with focusing on doing. But from the perspective of the people who are doing the doing, it's a problem. A golfer who does all the right steps of positioning body, club, and grip without aligning with wherever s/he wants the ball to land will not be successful in playing the game. People who are performing process and project activities also need to see what the desired work product is, and where it is intended to land.

Using activity analysis as a project management or organization change tool is seldom useful to the people who *do* the work. It is useful to designers as a display of interconnections and interactions that can be streamlined to create efficiencies or scheduled to establish a critical path. But for the Doers who will perform the tasks and activities, including making decisions and developing documentation, neither an activity map nor an activity schedule provides an opportunity to see where, how, or whether their work product will be used, successful, or valued.

WORK AND WORK PRODUCTS

All work activity can reasonably be expected to produce some sort of work product: a physical product, a service, or a communication that will "exit" an activity and be "delivered" to the subsequent activity of some type of customer. Doing work activities without the opportunity to peek over the transom to see where the deliverable goes and how it is deployed in subsequent operations denies the Doers any chance to consider improvements that might reduce activity and production costs and/or provide greater benefit to the Receiver.

For the Doers, work does not flow anywhere. Work is what happens at their desk, phone, or computer, in the inventory storeroom or behind the wheel of machinery, or in meetings and conversations throughout the workplace.

- Work as verb: Activities, tasks, and exertions, e.g., create, operate, prepare, maintain, solve.
- Work as noun: Work products, deliverables, and events, e.g., a product, service, or communication; a result, output, or handoff transmitted from Sender to Receiver.

We cannot communicate effectively by using the same word to represent two different meanings. If work is something people, teams, and machines *do*, then it does not flow. What flows is the

other meaning of work: the noun, the achievement, the opus. What flows, from Sender to Receiver, is a deliverable work product – a physical product, a service, or a communication.

Figure 3 shows the two symbols needed to represent a project in terms of “work and work product”. The boxes (or circles) represent work being done – the *doing* of work. The arrows represent the work products that connect Sender and Receiver. That’s it.

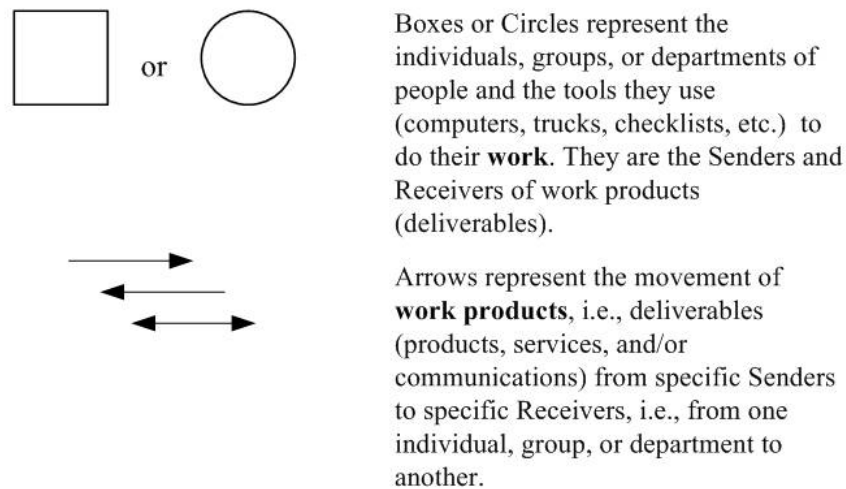


Figure 3. Work-Product Map Symbols: Boxes = Where the work is being done. Arrows = Where the work product is coming from and where is going.

Those of us who have been computer programmers know the importance of using many symbols to represent components of a process. The decision symbol, for example, a diamond-shaped figure with arrows coming into and out of it, shows the point where a decision is required and what steps are needed depending on the decision’s outcome.

But from the perspective of the Doers and the people who coordinate their work and work products with others, decisions are part of their job. For the purposes of establishing a “work product map”, all of the doing, the decisions, and documentation go *inside* the boxes. The object of attention then becomes the output of each box of activities, i.e, what is the deliverable work product, and where does it go *outside* of the boxes?

A PROJECT NETWORK OF AGREEMENTS

Management has always suffered from a problem of emphasis. Which comes first: the people and their activities, or the enterprise and its strategies for outcomes? Both are important, but trying to divide attention between them can involve disconnects that compromise the quality of outcomes or the likelihood of meeting budgets and timelines. The shift from a focus on activities to a focus on deliverables is an approach that combines people and enterprise into a shared purpose. The new meeting place for people and enterprise is “results delivered”.

A Work-Product Map of project deliverables is simple, clean, and manageable. Activities and processes can be mapped in the traditional ways as needed. Seeing a project in terms of agreements and deliverables, we are looking from a different perspective: delivering outputs and results rather than doing activities. This brings attention to clarifying deliverable specifications between Doers-Producers-Senders and Users-Customers-Receivers at every step in a process, or every stage of a project. Project Managers can bring Sender and Receiver together to clarify the specifics of deliverable forms, features, and functions, and establish agreements that are directly relevant to both the Doers and the Users.

A Network of Agreements

Figure 4 shows a simple Work-Product Map of project work groups (boxes) and their inputs and outputs (arrows). The arrows are the products, services, and communications delivered from Senders to Receivers, and they are established and maintained by agreements between Senders and Receivers. The necessary activities and decisions to produce outputs are performed in the boxes, and can be organized and scheduled using traditional activity-based project management tools as desired. The deliverables, and the agreements that frame them, can be detailed in conversations between Senders and Receivers.

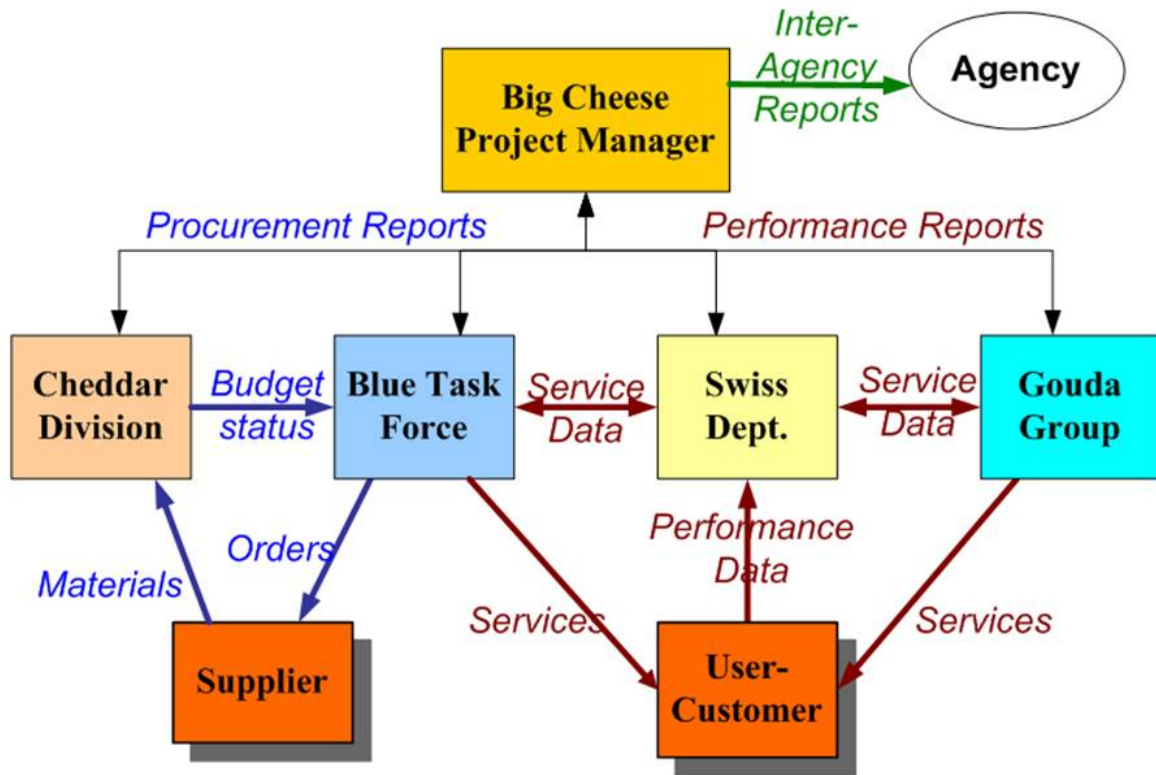


Figure 4. A Work-Product Map as a Network of Agreements: Boxes = Activities. Arrows = Products, Services, and Communications, per Agreement

The Project Manager's job concentrates on establishing, updating, and coordinating the changes in agreements that frame and define a successful project. There are four types of project agreements:

- (1) Rules, laws, and regulations, including contractual documents, standards, site licence requirements, and regulations;
- (2) Resources and inputs of all kinds, including time, money, people, facilities, equipment, materials, information, technology, and supporting documentation;
- (3) Requirements for project schedules, budgets, reviews and measures; and
- (4) Work-Product agreements among key players, internal and external customers, and the interim and final deliverables that connect them, i.e., the boxes and the arrows.

The first three types of agreements are traditionally managed with the tools of Project Management. The last – connecting key players by establishing agreements for the deliverables between them – cannot be accomplished by specifying activities and schedules alone. It requires a focus on work products that allow the Project Manager to create and manage agreements instead of people, and to manage results instead of work activities.

Defining a network of agreements is valuable for people other than the Project Manager. All participants in a project can benefit by seeing the “big picture” of players, and deliverable agreements. In Figure 4, for example, the Swiss Department and the Gouda Group can see they will communicate via a deliverable called “Service Data” that will coordinate their two distinct relationships with User-Customers. They can also see they need to create this deliverable in a form that will provide the Big Cheese Project Manager with a separate deliverable, “Performance Reports”, to be supportive of the eventual “Interagency Reports” that go out of that manager’s office. These two groups, Swiss and Gouda, can now define their deliverable specifics, including schedules, content, and format, to support accuracy and clarity for themselves, and useful information for deliverables farther downstream. The resulting agreement between them will define their exchange of “Service Data” to achieve desired impacts on the larger network as well as their own needs.

Deliverables and work products are the many results and sub-results that connect a network of individuals and groups to complete a project successfully. Every deliverable has a Sender and a Receiver, with the Sender as the producer, worker, and Doer of activities or processes. The Receiver, as the internal or external customer, is the interim or final user of a deliverable. An agreement between Sender and Receiver on the features and functions of each deliverable will save time and money by avoiding guesswork on the part of the Sender and disappointment for the Receiver.

TOP TEN TIPS TO MANAGE A PROJECT PERFORMANCE NETWORK

Ten ideas to conserve a Project Manager’s time, talent, and temper by managing a project as a performance network:

1. **Work-Product Map.** Draw – and maintain – an updated Work-Product Map of key players in your project with all deliverables that connect them. Begin with your Project Scope’s description of project output to identify the location of deliverables. The Work Breakdown Structure can also be useful to identify the deliverable-oriented groups who will send and receive key outputs/inputs. Then identify the locations and specifics of sub-deliverables that will be necessary to produce the intended outcomes of the project.
 - Note: Products, services, and communications are deliverables. Information and supporting documentation are deliverables. Resources of all kinds, if they move from place to place, are deliverables. Feedback is a deliverable. A request for feedback is a deliverable.
2. **Visual Displays.** Display Project Management summary information in places where all sub-leaders in the project can see them. These displays include schedules, requirements, and measures and, of course, the Work-Product Map.
3. **Deliverable Definition.** Support meetings between key players (preferably in the presence of the Project Management displays) to add to the specifics of the deliverables that connect them, and to establish agreements for delivery functions, features, and timelines. Insist on complete agreements for deliverable content and attributes, and a schedule for regular performance review and update of agreement details.
4. **Agreement Management.** Avoid scope creep by staying on top of the status of Work-Product Map agreements. Build this in to your Change Management Plan: specify who is accountable for managing each agreement in the network, and establish a schedule of

status reporting on the condition of those agreements. Non-performing or outdated agreements in remote parts of the network can create unexpected requirements for work or alterations in deliverables in other places. Similarly, agreements that change between Sender and Receiver in one part of the network can require review of other agreements that are connected upstream or downstream. The Project Manager is responsible for the integrity of the network, and scope creep is a symptom of unmanaged agreements for deliverables.

5. Resource Management. Establish direct communication with the key players responsible for critical project resources and their authorizing authorities wherever possible. These relationships should not be delegated until agreements for resource-deliverables are clear and you have confidence that they will be honored appropriately.
6. Smart Meetings. Lead short, smart project meetings (preferably in the presence of the Project Management displays). Participants report on the status of the agreements associated with their work group. Use the Work-Product Map as part of the agenda, and have the group identify any deliverables that are failing to maintain a successful connection between Sender(s) and Receiver(s) in any portion of the project's network of agreements.
 - Note: Meeting focus is on establishing, updating, and managing agreements (including schedules) in the project's performance network of deliverables, not on tasks and activities.
7. Change Implementation. For every change in network agreements, deliverables, or schedules, it will be necessary to involve all relevant and affect parties in making the necessary changes to the agreements, and to take responsibility for communicating change requirements to all affected and for supporting the resolution of problems and extra costs due to the change.
8. Communication Management. Talking about and for the accomplishment of deliverables is different than talking about and for "doing" things. Effective management to produce on-time and on-budget deliverables requires that project managers complement their existing "doing" vocabularies with "done" vocabularies in which conversations are not simply about what people are doing, but address the status of, and customer reaction to, deliverables and work products.
9. Schedule Management. The Project Manager must ensure that people working on the project have accounted for the time that will be required for them to do the work to produce the deliverable. Within a culture of "doing", it is easy to assume that as long as one is busy, the work is progressing. Time spent on meetings and appointments may be vital to the quality of results and the coordination and management of responsibilities, but doing the work of producing work products also needs to be scheduled.
10. Buy-In. When there is, at any point in a project, a question about "buy-in", it should be understood as a function of agreements between players in the project's performance network. Players whose "buy-in" is necessary for the project deserve a place on the Work-Product Map.

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