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Projects vs. Operations: The Model and Framework for Product-Based Project Management

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Abstract

Mature organizations get stuck to current operations, draining their competitive advantages. In unstable times, right projects are the key to success. But CEOs tend to focus themselves on 'generating current cash flow', avoiding investment and missing the opportunities. The simple yet powerful framework was discovered and implemented, allowing the real organizations balance and mix their project-based development with current operations, with affordable learning curve and initial resources.

The idea is representing an organization as 5 (usual count) specially selected product portfolios, and allocating all the tasks to them. The tasks are categorized as 'reproduction, promotion, development' classes, and gradually grouped to products and projects to reproduce, improve, or promote specific product versions. Permanent and temporary responsibility is assigned. The process similar to P2M 'Vision—Product—Service' cycle is established. Customer expectations are set as the reason and the target for any tasks. This allows for lowering overhead for project management, fully integrating the developmental project management to a decision-making process, and decisions based on total cost of ownership allocation per any product.

Subsets of Project Management, Product Management, Demand/Value management, Interaction Design, and Strategic Management were adopted and linked together to form a unified process of decision-making and value delivery through both waterfall and iterative projects. Selected guidance from IPMA ICB, PMAJ P2M, ISO 9241, and Lean was implemented. The framework is being successfully implemented in several pilot organizations to lead 'project-based development through versioned product portfolios', under the name of 'D3' or 'Demand-Driven Design for Organizations'.

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1. Introduction and the purpose

Usually, start-ups strive for being successful in bringing new products or services to market. They have the strongest motivation, including personal ambitions, limited funding, and the need to meet investors' expectations. And they have almost no limitations like existing procedures, skills of operational personnel, etc. Quick and efficient decisions are made much easier at this stage. And the organization itself is obviously a project.

Successful organizations are generally less open to new initiatives (either by themselves, or under pressure of shareholders). They are more process-oriented, more rigid, and if not handled properly, eventually they could start to 'stick to their success', avoiding active changes.

Start-ups 'have less resources', successes 'have less speed and flexibility'.

In competitive changing environment, the latter could finally lead to a loss of a market share.

How could we integrate development projects into a decision-making process to mix the startup-like speed of changes and mature operations, and benefit from both? To provide a balanced decision-making process for CEO? In my effort, I found no existing solution in the project management area, simple enough to implement. There were always some links missing between strategic goals, customers, development projects, the budget structure, and the decision-making process.

I had to discover and implement myself some simplistic framework to allow real organizations balance and mix their project-based development with current operations, with affordable learning curve and initial resources.

This publication sums up some 10 years of my research and practice, presenting basics of such a framework. It is currently being actively developed and implemented under draft name 'D3 framework' or 'Demand-Driven Design for Organizations'.

Specific templates, IT tools, and consulting services are being provided for pilot customers now, and will be available to wider audience soon.

The primary segments of current 'early adopters' are IT, telecom, real estate, toys, finance, and entertainment. Actual scale is from 10 to 5000 employees, geography is primarily Russia, but there are also partial international implementations throughout customer branches in Europe, Asia, and ex-USSR countries.

Core principles and techniques briefly described in this paper are in process of 'opensourcing'. A collaboration and feedback from the professional society is highly appreciated. And if there is some similar research I am not aware of, I would be happy to consider merging the effort.

2. The Context and Common Issues

For the purpose of this work, let us distinguish between these kinds of activities of an organization:

Table 1. Activities of an organization.

Activity	Description	Typical projects	Target customers
Development	Innovations, research, investment	Changes in processes, products, and the organization as whole	Further (there may be even no current demand)
Promotion	Customer attraction, sales and marketing	Events, marketing actions	Tomorrow's (inviting the next customers)
Production	Creation of goods and services, Operations and Support	Project-based production for customers	Today's (contracts for current customers)
Financial	Saving and multiplying resources	Financial	Yesterday's (managing finance gained from the past)

Every kind of activity could have its projects, but those projects are very different in motivation, management approach, and championship.

Financial projects (making money by money) and production projects (fulfilling customer contracts) rarely cause any conflicts because the benefits are obvious, and they are just part of the corporate plan. Promotional projects are usually not a problem, too, but the justification of a budget and a roadmap is tougher for them.

Anyway, these three kinds of projects are usually covered by specific frameworks (production *is* core competence), or they are simple enough to be done as 'task lists', or passed to some partners for whom it is *their* core competence.

But could we realistically outsource the organizational development? Of course, no! (if we are not going to gift all the future benefits to some other party).

2.1. Common Issues with Development Projects at the Management Level

At the Management level, there are daily reasons to postpone development activities, both logical and psychological. For example:

- The sound results are often too far from today to consider,
- Long-term investments decrease operational income (and often decrease bonuses of the management),
- 'The situation is good enough for us'—just ignoring market changes,
- Development could be just subordinate to operational targets;

In general, there is a problem of choice between what is 'good for today' and 'good for tomorrow'.

Without systematic decision-making process, culture, and motivation to balance operational and developmental priorities, a top manager of a larger organization has enough reasons to prefer current operations.

2.2. Common Issues with Development Projects at the Performer's Level

In worst case, a specific performer could have these sources of tasks:

- Directives from his/her supervisor,
- External or internal customer inquiries
- Department plans,
- Recurring procedures,
- Project plans… project plans… project plans;

Multiple task sources often lead to significant losses for 'attention switching'. The possible result is ignoring (decreasing a priority) of all the signals except the most annoying ones. For specific organization, the source could be a manager, customers, pressurizing peer, etc. Or, an employee is selecting the task at his/her discretion (so actual productivity depends on the personality, not the management).

In such a case, the deliverables and reports could be published to the customer and/or the manager only, put to the e-mail or shared folder. Reports are often separated from actual results, or missing. The significant amount of afterwork could be postponed.

The stable result of such dynamics is loss of understanding of 'why do this/that', and further demotivation.

To maintain the level of self-appraisal, a teammate tends to 'narrow the attention' to just one plan, or one project, or one team, or one product, if not abusing the situation.

And, of course, the default narrowed plan is the operational plan, sacrificing the development.

3. The Idea

At the bottom level, there is a **flow of tasks** for specific employee. (Almost) no employee could do multiple tasks at a time, so the stream is serialized. At this level, organizational efficiency is depending on:

- Personal productivity within individual task,
- Doing tasks of every participant with right order and priority,
- Balancing 'doing' with 'improvement of that doing'.

At the top level, there are **organizational goals**. There could be some mission there, or strategic goals, operational targets, etc. At this level, organizational efficiency depends on:

- Balancing between long, mid, and short-term targets, various stakeholders, etc.
- Everyday conversion of goals to a straight task structure and back—modifying goals based on a feedback from all levels.

The idea is to connect the levels with straightforward sustainable structure, simple enough to make the base for decision-making process at all organizational levels. Between the top and the bottom, there are

- **Processes** to achieve recurring results,
- **Projects** to achieve new results,
- **Programs** to achieve strategic goals through projects, processes, and tasks;

From this perspective, projects, processes, and programs are just the way to aggregate the activities, participants and artifacts to achieve specific goal. Depending on the complexity and motivation, they could be managed both with structured techniques, and without. The missing links for the balance and integrity are:

- **Products** as an aggregation of results of any single process or project to meet specific expectations (a car, a service, a structure of employees of a company, a manufacturing process—are all products),
- **Demands** (expectations, benefits, wants and needs) and their **source** (interested parties) as the reason for doing processes and projects, pointers to accepting parties, and the motivation.

The straight and maintainable structure from goals to tasks is defined by the formula:

'***Tasks** are part of dynamic **processes** and **projects** to make, improve, or promote **products**, creating **value** while balancing **demands** of various **parties**.*'

The **value** (product quality) is measured as the influence to *time*, *cost*, *opportunities*, and *satisfaction* of specific parties, associated with some *planned/actual use* of the product.

4. The Lifecycle

All the activities both end and start with somebody's *demand*; to fulfill them, we deliver respective *values* (benefits). To create values, we make *tasks*.

Overall, we drive the *embodiment* of the value from idea to the product then to new idea (vision, *modus*). The desirable vision should be used as the 'prototype'.

We are managing supportive structures of tasks, values, and demands (projects, processes, products, and 'usefulness'). We could easily map that to a P2M project management phases:

Fig. 1. Basic P2M Project Management Phases.

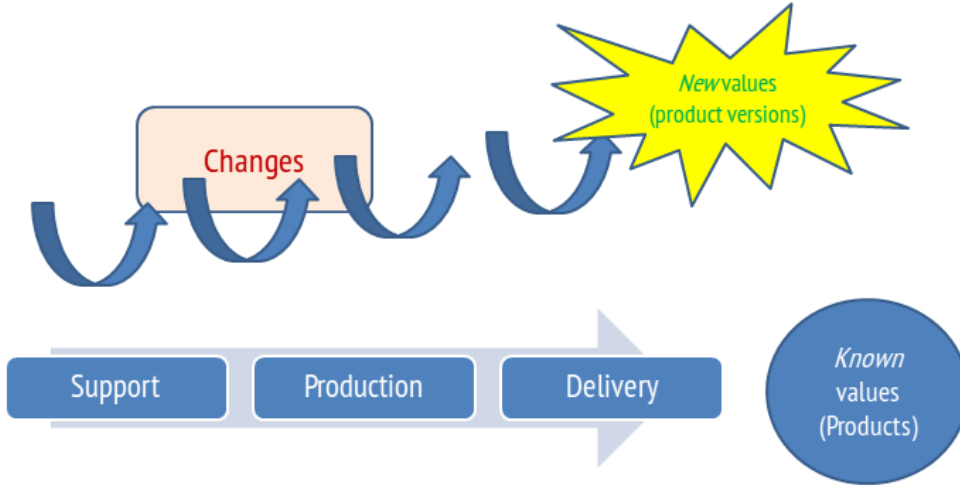Mapped to the organization this way (financial activities not shown):

Fig. 2. Known and new values delivery.

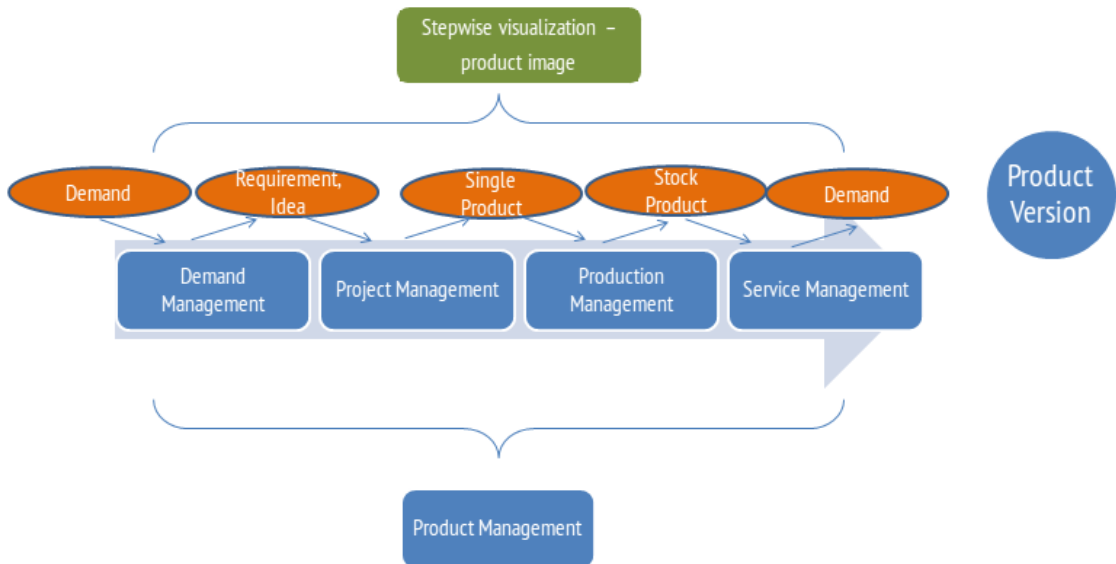The final linked process could be represented like:

Fig. 3. Overall Process—from demands to demands trough products and projects.

And the decision making is a process of selecting 'which products, phases, and options in this process to allocate resources to'.

5. The Implementation

5.1. Products, Portfolios, and Permanent Responsibility Roles

First, we group all the activities of an organization into up to 7 portfolios, split by customer groups and logical functions (usually 2 to 5 are enough, while the rest could compacted to one activity per portfolio only):

Table 2. Product portfolios.

Portfolio	Description
Products *for* the customers	Primary product portfolio; the goods, services, etc. the organization is providing to its customers
Products of departments	Functions (internal products) of organizational units, e.g. Customer/Lead portfolio, Personnel, Risks, Resources (Finance), IT Systems, Time, etc. Embracing things that employees do themselves.
IT systems	Means of automation and productivity—software and hardware. Things that machines do instead of people.
Products *of* the customers	For B2B, enumeration of the customers' products to manage their needs (requirements *to organization's products*). For B2C, the registry of their personal expectations.
Products of partners and contractors	Things we don't focus on. Outsourced services, procurement, etc. to manage *our organization's* requirements.
Corporate products	The organization (or network of organizations) as a product. Used to manage shareholder expectations, major reorganizations, mergers and acquisitions.
Social products	For socially responsible organizations, all the relevant activities for society, the government, etc.

Now we should create and maintain individual 'Product Books' (or Product Folders), under accountability of specific product managers, to support further decision-making process, product delivery, development, and promotion. A typical product book could include product description, process diagrams, presentation, promotional materials, procedures, manufacturing documentation, templates, etc. It is the 'current configuration' of the product.

For each portfolio and product, we should assign *permanent responsibility roles* first, basing on the natural organizational roles, e.g. CxOs for organizational functions, then product managers, IT program managers, procurement managers, etc.

5.2. Tasks, Scenarios, and Coordinating roles

We group all the tasks in the following categories:

Table 4. Task categories.

Category	Meaning
Reproduction (delivery)	The tasks needed to reproduce a product according to a current process, e.g.: • Mass production of goods and/or services • Resolving internal service requests (such as Expense, hiring, or IT requests) • Current lead or account management, etc.
Development	The tasks needed to change the product and connected processes, or develop completely new products, or cut deprecated ones: • New requirements from Marketing or anywhere else, • IT change requests (bugs, features, new product requests), • New service requests, etc.
Promotion	The tasks needed to promote, or advertise the products and services (not adding to their production or development):

	• Marketing, sales, and promotional activities,
	• Internal PR and training for internal products, etc.
Unclassified	A special category needed to encourage changes.

We should allocate all the tasks to a product and one of the categories, and start managing their productivity.

First, we teach the team to realize that every task is needed to bring some value for somebody. Teach them that the usefulness and priority of the task (and the need to do it at all) completely depends on that value.

Second, we encourage people to look over their structure of tasks and propose some 'development activities' to improve productivity of Delivery and Promotion tasks ('while doing, please optimize/avoid further doing').

To the best, the task management should be automated with some task tracking software. But for lower amount or trivial activities, or for a field work, the task cards and registers work well, too.

With the principle of 'why (and what for) do this task' learnt by the team, the organization starts gradually improving with or without deep automation.

For process management purpose, we template tasks with a group of simple 'scenarios' which are linear primary workflows for one role moving one artifact (token) from a demand to a fulfilled demand.

To coordinate specific processes, systematic *coordinator roles* are introduced (like call-center, Line 1 Support in IT, Account Managers, Personal Assistants, etc. Also, every person responsible for this or that task holds a temporary responsible role.

5.3. Project and Program Management

'Product reproduction and promotion' projects are not covered in this work, as they are core competence of project-oriented organizations, and there are many well-known patterns and practices available to manage them.

All the rest of projects could be considered 'product development projects' of the organization.

For this purpose, we use the top-down approach, *setting up programs first*.

A **program** (in this framework) is just a sequence of activities needed to develop this or that product over time, connected to an express strategic goal or an implied group of demands of specific interested parties.

With this approach, we could always equate the number of programs to the number of products, plus some strategic enterprise-level initiatives. Then we could assign a natural program manager *prior* to extensive planning. He/she is usually the *product manager* (except of complex cross-product programs, where deep program management expertise may be needed).

'If we have the product, then we have a program for its development.'

Second, we assign (mark) all known tasks, requirements, and initiatives to that program. The working document could be a task list in the tracker software.

Third, we create a **program roadmap** (which is a product development roadmap). To do that, we:

- Pack short-term and simple tasks to 'releases' (like IT developers do), with fixed timeframe. All the tasks are assigned 'must have', 'should have', or 'could have' status. This forms an iterative product development cycle (release roadmap);
- Transform long-term and complicated tasks (e.g. new product development) to **dedicated projects** for professional project managers with full-scale competence requirements;
- Use simplified project management methodology wherever possible.

Every result of a project, every modification of a product is represented as the modification to a 'Product book' or folder, making a new version of that product. It could be:

- A new software release,
- A new set of HR procedures and organigram,
- A new sales book for the customers' products, an updated risk portfolio, etc.

5.4. Simplified Project Management Framework

As I mentioned earlier, for the most of product development roadmaps and simple projects, we use very basic project management processes and templates, to make sure they are understandable for non-project-related personnel. We imply one template product-based project management process, consisting of these fixed stages:

Feasibility study—Initiation—Design—Implementation—Acceptance—Rollout—Closedown

For iterative projects, design/implementation/acceptance/roll-out phases could be repeated.
Through all the phases of a project, there is the fixed set of minimal planning documents:

- Primary document is *Project Statement* (which is the Statement of Work, Demand Description, Product Description, and overall Project Plan at once). This document is created first, and transforms over time.
- Additions are detailed *schedule*/task list, *budget*, *resource* and *team* allocation.
- Prior to the project launch, we could use a *Feasibility Study report*.
- During the project, we use *Weekly Review* forms which are both activity/milestone reports, and change requests.
- For the milestone presentation and closedown, we use *Progress Presentation* form.
- *Acceptance forms* are used for transfer and formal acceptance.

All the rest are **actual project artifacts** (like contracts, design plans, product descriptions, products itself), allowing to focus on visual product creation.

The work routine of a Project Manager is gradual visualization and embodiment of an *idea* of the project (described in a Project Statement), towards visible *product*, with periodical Statement / Schedule update as the feedback.

5.5. Decision-Making Process

To allocate resources and priorities between products, projects, and current activities, we establish Steering Committees per one or multiple product / project / program portfolios. The functions of a steering committee are launching initiatives, accepting results, managing portfolio of products and their development programs (projects); it is responsible for defining priorities and providing resources. Usually (to separate time-consuming activities from each other), committees are:

- Business Development Steering Committee, for strategic goals, corporate portfolio, and rare key projects,
- Product Development Committee, for customer-oriented products and connected portfolios
- IT Steering Committee, if needed, for IT systems development
- Other committees are formed on demand, like Risk Management, Budgeting, etc.

The uniform process is

- Take product
- Evaluate its current / target parameters
- Decide on operational and promotional activities
- Initiate development changes (or new products)
- Review current development roadmap and proposals
- Act on current projects where needed
- Set priorities and allocate budget on new initiatives.

5.6. The vision and status of a project

The vision of a project is reflected in the special form of Project Statement. This document should be constantly kept up-to-date. Please note the same statement structure could be used for products, processes, and tasks, too.

Table 6. The Structure of Project Statement.

Name	Value
Project/product name	Descriptive short and/or long name of an activity
Customer	The primary stakeholder or their group
Demand	The expectations of the primary stakeholder (expected value)
Result	The outcome (product, deliverable) as a thing
Responsible person	A project or program or product manager
Terms	Time-related parameters
Cost	Cost-related parameters
Features and Constraints	Quality-related parameters
Success criteria	Primary acceptance criteria agreed between parties
Breakdown	Top-level task/deliverable breakdown
Participants	The team
Resources	Specific resource list
Approach	Techniques, methods, strategy
Locations	Places where the activity is being made or used
Context	The bigger picture
Risks	Primary risks

Weekly report is one page or an e-mail describing what is done/what is planned/what should change.

With visual simplicity of forms, the art of actual filling requires specific training of PM personnel, mostly to avoid incomplete phrases, lack of facts or responsibility, etc. The systematic process of filling in and review is needed to ensure proper vision of a project through all the team (this corresponds to forming a 'Ba' space).

5.7. Other changes

Supportive IT systems like task tracker, versioned document repository, and a portal are recommended to help focusing the attention of the team, and facilitate quick decision-making.

The budget structure must also reflect product, task, and project structure described in this paper.

Some basic to advanced training on 'roles of a CEO/product (project, functional) manager, coordinator, and performer' is also needed.

6. Limitations and Implications

Generally, the principles of D3 framework have no known limitations. The approach could be widely used, cutting some processes to just a 'work of mind', or 'rolling out automated procedures' wherever complexity needs.

Maybe, segments like IT or growing ambitious organizations could benefit the most. Primary limitations are:

- Lack of the motivation of a top management team (motivation should reflect goals and priorities),
- An existing organigram issues (virtual overlaid role structure with budget allocation should help),
- Protest-based cultures (could be dealt with by avoiding detailed prescribed procedures,
- If the customer focus is actually unneeded, the use of the framework is questionable by design (yet I believe proper identification of the customer is still helpful in this case).

7. Mapping and Use of Standards and Methods

The framework is just defining the integration level, and could be complemented by any of the PM standards and appropriate frameworks for product and value management, e.g.:

- Basic lifecycle has much in common with P2M standard (by PMAJ);
- D3 is detailing the 'Context Competence' part of IPMA ICB, or some 'missing integration part';
- Lean principles like kanban, kaizen, gradual loss elimination are directly embedded in the framework;
- For IT, frameworks like Scrum, ITSM, RUP could be directly overlaid upon;
- Product quality by customer groups is inspired by ISO 9241 standard for Human-Computer Interaction;
- Methods like Cost-Benefit Analysis, Activity-Based Costing, SADT/IDEF0, were practically tested and integrated with D3 framework;

8. Conclusion

The proposed D3 framework, described in this work, is helpful for orchestrating all the organization's activities and its decision-making processes to balance between Operations, Development, and Promotion, by setting the common ground for all the activities, the goals, and the budgets.

This is done by treating an organization as sets of interrelated Product Portfolios, allocating all the tasks and expenses to products and activity categories. It helps facilitating unified decision-making process, based on their influence to demands of various interested parties, represented with cost, time, opportunity, and satisfaction scales.

Development tasks are structured as 'feature sets', or 'roadmaps', or 'simple, iterative, or complex projects', which allow for integration of each and every project into everyday organization life. Such projects could be managed with or without dedicated Project Management professional (depending on their scale and complexity).

The results of all the projects and other activities add to a unified base of 'organizational product configuration', which is actually a knowledge base, supporting sustainable learning organization.

The simplified business process management in form of almost linear scenarios allows for easy gamification.

And finally, the Project Manager role is shifting to a Project Leadership, with focus on soft skills and gradual implementation of values—from idea to the product.

The elements and ideas of D3 framework could also add to future project management standards as part of integration for balancing between current and developmental activities of an organization.

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