

Project Processes: A short reminder on project life span and life cycle ¹

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In each project, we operate two sets of ever-evolving processes in being for centuries, project technology and project management (Abdomerovic 2022, 18-43, 214-218)²:

- Project technology processes are different for each project. They can be observed at various levels, from project business phases to the most detailed project activities or their parts.
- Project management processes are generally the same for each project. The central processes (planning, executing, controlling, and back to planning) operate at the most detailed level of project technology only, i.e., project activity or its part, and govern all upper levels of project business, including business phases.

Project Technology Processes

There is no other example in project management but project technology and related phases that can easily have many purposes, configurations, levels, names, users, and others. However, any project phase and its metrics depend on the most detailed and unique project elements, i.e., project activities or their parts.

Each project can have, and usually has, sets of different phases, described with different terminology, for various stakeholders and levels of project development. For example, we can have in a project, simultaneously, the phases promoted by national, international, professional, or industry standards, banks, contractors, stakeholders, and other subjects participating in project development. We initially present phases of a particular set as a sequence, but during project plan development and implementation, they overlap; there will always be a significant change order that we must initiate, plan, implement, and hand over to the user.

Seemingly messy requirements for numbers, types, sources, contents, dynamics, and users for phases coexist perfectly during the development and implementation of a project management plan. The key to such broad inclusiveness is understanding that a set of project phases represents the top of particular contents. In contrast, the project activities present the lowest contents for a specific technology within the project business and share among phases. Therefore, we should not

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² Abdomerovic, Muhamed. *Project Management Planning*. Peter Lang Publishing, Inc., New York, Berlin, Brussels, Lausanne, Oxford, 2022. www.peterlang.com.

be wary about the number of phase sets, phases in each set, or names of project phases. Their initial arrangements, whatever they are, become evident during the development of the project management plan and updated during the implementation of the project management plan.

However, discussing source terminology for the collective names of project phases may help a better understanding among project management professionals. Here are some examples:

The project phases summarize technological and management work attributes and who should be involved in each phase (Abdomerovic 2022, 271-272, 296). Project stakeholders typically arrange phases in lineal or circular models, depending on the feedback to previous phases. While the lineal model starts at the left and proceeds gradually to the right, the circular arrangement runs the round until the project hands over to the customer. For example, project phases are collectively known as:

- Project life cycle (PMI 1996, 11-15)³; (PMI 2017, 18-19)⁴
- Project life span (Wideman 2004, 26-32)⁵
- Project life cycle phases (Archibald 2004, 1)⁶
- Project life stages/cycle (Wearne 1973, 10-16)⁷
- Project cycle management (Arcidiacono 2014, 1)⁸, others

The term 'life span' better describes a project's common, temporary nature; it relates to limited contractual opportunity, e.g., initiating, designing, procuring, constructing, commissioning, and handing over the project to the customer. Besides, the term 'life span' resolves decades-old confusion within the project management community. This model presents project management phases in lineal form, progressively bringing a particular facility into being (Wideman 2004, 26-31, 49-71).

The term 'life cycle' may better describe a project's occasional, sustainable nature; it reflects a long-term business opportunity: initiate, design, procure, construct, install, commission, operate, maintain, and transform the project in other value (Wearne 1973, 10-16). However, we should save the 'life cycle' term for another purpose.

³ PMA 1996. *A Guide to the Project Management Body of Knowledge (PMBOK Guide) 1996 Edition*. Newtown Square PA: Project Management Institute, 1996.

⁴ PMA 2017. *A Guide to the Project Management Body of Knowledge (PMBOK Guide) 2017 Edition*. Newtown Square PA: Project Management Institute, 2017.

⁵ Wideman, Max. 2004. *A Management Framework for Project, Program and Portfolio Integration*. Vancouver, BC: Trafford Publishing (UK).

⁶ Archibald, Russell. "Part 2 Project Life Cycle Models." *Max's Project Management Wisdom, Guest Article*, (2004): www.maxwideman.com.

⁷ Wearne, Stephen. *Principles of Engineering Organization*. London, UK: Edward Arnold Publishers, 1973.

⁸ Arcidiacono, Giuseppe 2014. "Use of Project Cycle Management in Project Selection Process: Evaluation of European Commission approach." *PM World Journal III, Issue III* (March 2014). <https://pmworldlibrary.net/wp-content/uploads/2014/03/pmwj20-mar2014-arcidiacono-project-cycle-management-FeaturedPaper.pdf>

We understand the 'life span,' or project technology processes and their contents, as a substantial part of project management plan development.

Project Management Processes

Project management processes define how we should manage technological and management work. There are different terms for project management processes and their content:

- Project control cycle (plan, monitor/report, analyze, redirect/control, modify plan) (Wideman 2004, 136-139).
- Project management life cycle (planning, organizing, implementing, controlling) (Turner 2006, 94)⁹.
- Central process groups (planning, executing, controlling) (PMI 2000, 30)¹⁰, others

The above terms and contents describe the feedback nature of project management processes continuously recurring in cycles while implementing the project management plan; "the same cycle repeats over and over throughout the project life span" (Wideman 2004, 137). In general, the contents of the project management 'life cycle' consist of:

- Inputs to planning processes: release of the original project management plan, organization, security, objectives, and others. Outputs from planning processes: release of current and baseline project management plan, and others.
- Inputs to executing processes: current and baseline project management plan, environmental factors, management issues, financial issues., and others. Outputs from executing processes: measured work results, change requests, and others.
- Inputs to controlling processes: measured work results, change requests, disputes caused by work performance measurements, quality control measurements, work acceptance, payment issues, change requests, and others. Outputs from controlling processes: outcomes of controlling processes for work results and change requests, and others. These outputs update inputs to planning processes, which initiate a new cycle.

For example, the construction crew's output from executing processes is feedback through a quality control output from the controlling processes to compare with planned input. The planning

⁹ Turner, Rodney. "Towards a theory of project management: The nature of the project governance and project management." *International Journal of Project Management* Volume 24 (2006): 93-95.
www.elsevier.com/locate/ijproman.

¹⁰ PMI 2000. *A Guide to the Project Management Body of Knowledge (PMBOK Guide) 2000 Edition*. Newtown Square PA: Project Management Institute, 2000.

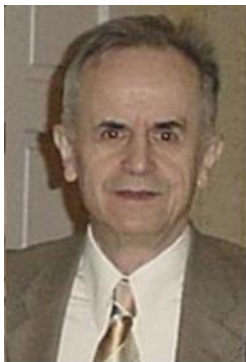
processes then take the difference between the planned data and output to change the input in an updated plan for the construction crew and optimize the construction crew's output. We continue progressing within the feedback cycle until we accomplish the last activity.

Therefore, feedback is a sequential and recurring causality model. If a feedback process is incomplete for the work elements or its part, the succeeding process does not happen. On the data date, we should assess all activities under progress and complete the feedback cycle. Finally, we may provide the status, progress, forecast, change, and causes for project activities, higher project components, phases, a whole project, and the project business. Before we start implementing the project management plan, we must ensure that project contract documentation, original plan, payment procedure, and guarantees are approved and delivered to the contractor.

The project management processes are consistently used to control changes at the activity level only and, consequently, to control changes at any higher level of the project or project business 'life span,' including their phases.

We understand the 'life cycle,' or project management processes and their contents, as a substantial part of project management plan implementation.

About the Author



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Muhamed Abdomerovic, D.Eng., Civil, has had a diverse and progressive career experience for over thirty years in the development and application of scientific principles to project management planning. He is the author of the book *Project Management Planning*, published by Peter Lang Publishing, Inc., New York, Berlin, Brussels, Lausanne, Oxford, 2022.

(<https://www.peterlang.com/document/1241232>)

He has learned and experienced the challenge of project management planning through involvement in or management of many projects with total budget exceeding \$12.5 billion. While employed on a variety of projects in information technology, construction, process

industry and energy sectors, he has gained a broad insight into project management methodologies and practice.

Muhamed is currently an independent consultant. He was previously project planner with Vanderlande Industries, master scheduler with FKI Logistex's and program manager with Luckett & Farley. Twenty-five years ago he made the decision to permanently move with his family from Bosnia to the United States of America. His earlier experience in Bosnia ranged from construction manager trainee with Vranica to planning department manager with Energoinvest.

Throughout his career he has been an active participant in the development of the project management profession. He has published over 50 journal articles on project scope, time, cost and communication management. He has also published articles in six proceedings of Project Management World Congresses and has published four books. His current research covers the relationships among project management processes, project management system logic and system approach to project management planning.

In recent years he has been concerned with thoughtful project management planning issues. For example, we are observing today how promoters of project management planning derivatives are misrepresenting the scientific approach to project management planning. His most recent papers help reduce disconnects among project management system knowledge, planning and its derivatives.

He was consecutively recertified as a Project Management Professional (PMP) from 1998 to 2010 and has contributed to the development of the PMBOK Guide. He joined the International Project Management Association (IPMA) in 1972. He graduated from the University of Sarajevo with the Diploma of Civil Engineer. *Contact details:* 1100-F Metropolitan Ave., Unit 201, Charlotte, NC 28204, mabdomerovic@gmail.com