

FORMAT methodology from project management perspective

From our experience of case study applications of the FORMAT methodology, forecasting results appear, thanks to a sort of learning process. Learning requires time and repetitions. These two elements - time and repetition have a direct consequence in project management life cycle. This paper addresses these elements and other project management solutions embedded in the FORMAT methodology that manifested themselves during case studies done for Whirlpool EMEA¹.

Forecasting is based on learning about past and present features that influence a studied system. Knowledge about mechanisms that shape conditions in which the system operates, is crucial to investigate its future. Such knowledge is gained through studies of structure of the system and historical data series describing its behaviour. Knowledge about a system does not arrive at once. For a human analyst, working with data and information, requires time for reflection. This process involves two parties, analysts working inside project and a beneficiary, i.e. decision maker(s) (DM), who are going to use the results of the project.

Each project, from beginning to end, is composed of phases. Definition of project's phases by Project Management Institute (PMI) specifies five phases i.e. groups of processes inside a project (Figure 1). These groups are: initiation, planning, execution, monitoring and control and finally, closing. Application of these processes is an integral part of a project management life cycle (PMLC). Depending on the specific conditions of the project, the five phases can be applied in different ways, i.e. involving cycles while maintaining order. Decision on which configuration of PMLC should be used is made during the planning phase of the project.

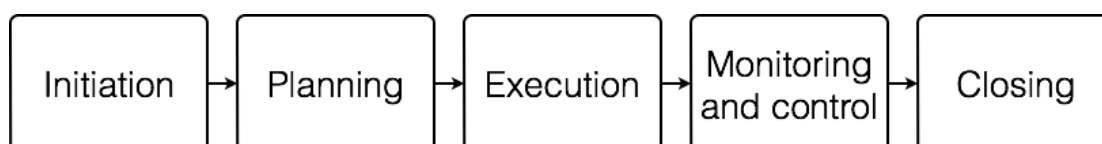


Figure 1. Project phases in traditional project management (TPM) (Wysocki, 2011).

Utilization of FORMAT methodology for a particular case study is formalized in the form of a project². According to a definition of a project, in contrast to operations, projects are temporary and unique. FORMAT methodology is based on a stage and gate process, which may suggest that it should be run as an operation rather than a project. The methodology itself is a process, however, it is worth noting that the application of FORMAT methodology on the case study makes it qualify as a project as it makes it unique for a particular case study.

Stage and gate structure of FORMAT methodology provides a sequence of stages to follow in order to perform a forecasting study. Sequence of stages in

¹ EMEA – Europe, Middle East, Africa

² A project is a temporary endeavor undertaken to create a unique product or service (PMI, 2013).

FORMAT is presented in Figure 3. Each stage ends with a gate. In the practical application in a project, each stage gets individualized for a particular case and for the analyst team working on it. The FORMAT methodology has an embedded ability to adjust to the case under study and to the skills of analysts working on it.

Looking into the stages of FORMAT methodology, one recognizes many actions that conform to actions advised in PMLC. In the following paragraphs, each action of the PMLC is referred to a respective element of the FORMAT methodology.

In order to guide a reader through steps of a project from the point of view of project management, the PMLC structure is described first. In regular project management, selection of PMLC is made at the second stage, i.e. project planning. The reason for waiting until the second stage is that before that the nature of the project is still being described. Before deciding about PMLC schema, the following questions need to be answered (Wysocki, 2011):

- Is it an innovative project?
- Do we know the goal of the project, or should it be formulated during the project?
- Do we know a method to use in order to arrive at the goal (if known)?
- Are the method and the goal unknown?

In case of a forecasting project, decision on a PMLC structure can be made in advance. Forecasting by means of the FORMAT methodology has a structure determined by the methodology itself, as well as the method to be used. More precisely, the methodology provides the freedom of selection of methods. Being a forecasting study, the goal is to describe a question about the future that should be answered. An answer to a forecasting question states a finish condition for the project and, in this sense, it is the goal of the project.

The degree of knowledge of method to perform forecasting and a goal of a project can be pictured as two-dimensional project space. Particular PMLC structures are placed in the diagram showing their adaptation to deal with goal and method knowledge in a project. (Figure 2)

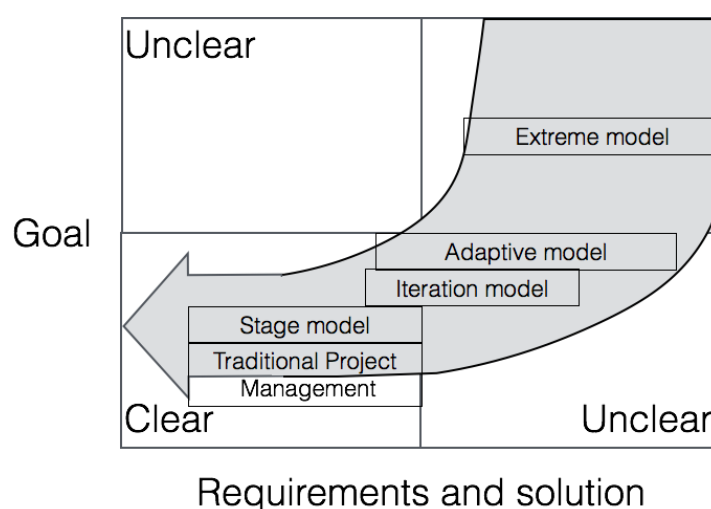


Figure 2. Project Management Life Cycle (PMLC) models in method and goal knowledge plot. (Wysocki, 2011)

Forecasting is a learning process as it was introduced before. Two main features supporting a learning process that are introduced in FORMAT methodology are minimum time between working sessions and iterations. From our experience, time between sessions should be at least three open working days (Figure 3). Such time is used by the analysts for a) drawing conclusions from previous sessions, b) working between sessions and c) preparing for the next session. According to the FORMAT methodology, each working session is associated with a particular step. Tasks linked with a particular step should be performed around dedicated working sessions, i.e. before, during and after the session and should not consume time allocated to the following steps.

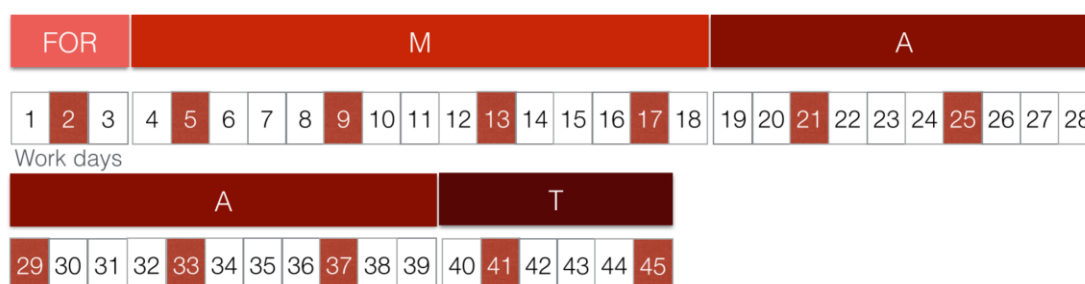


Figure 3. Working session planning for nine weeks with distribution among stages in FORMAT.

Iterations are not immediately visible in the FORMAT methodology. Iterations can appear as a repetition of some activities of a certain stage, where the corresponding gate was not passed or as a repetition of a complete sequence of stages: (FOR), (M), (A) and (T). An iteration may start when results of the forecast after first cycle are available and DM decides that the analysis should go deeper into the details of the analysed technologies, or if he/she would like to modify the scope of the forecasting question. Results from the second iteration will provide more data while answering the forecasting question. Presentation of forecasted system and answers to question, modified for second iteration provides DM with iterated data about forecast. This question-response cycle supports DM in decision making.

The iteration scheme, embedded in the FORMAT methodology, helps in selection of a PMLC. The chosen PMLC should support iterations (Figure 4).

Each of these two features, breaks and iterations, is addressed to different stakeholders. Time between sessions supports learning process of analysts working inside a project, whereas iterations support learning process of DMs, who are involved at the beginning and at the end of the cycle.

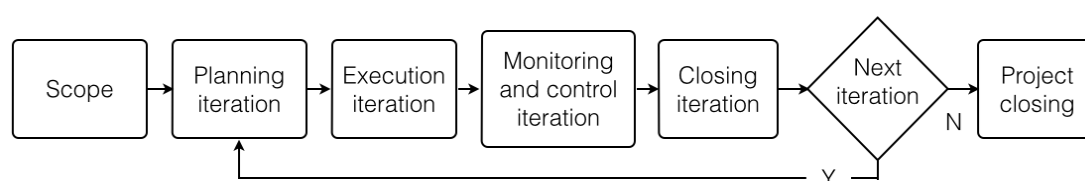


Figure 4. Iterative Project Management Life Cycle (PMLC) (Wysocki, 2011)

First three steps in PMLC-iterations i.e.: initiation, planning, execution are inscribed into the first stage of FORMAT methodology, stage (FOR) (Figure 5). Decisions required for these three PMLC steps are performed during session 1 of FORMAT methodology. This session gathers all directly involved stakeholders i.e. the analysts who develop forecast study, the users who are going to apply results and the beneficiaries of forecasting results i.e. decision makers. This set of stakeholders meet twice during one iteration, at the beginning and at the end of a cycle, to decide about next iteration or to close a project. Analysts meet regularly during working sessions.

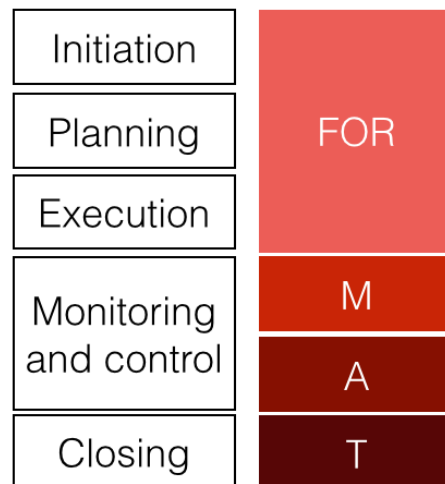


Figure 5. Comparison of phases in project management – left column – with stages in FORMAT methodology.

(FOR) stage performs tasks of three initial phases of PMLC i.e.: initiation, planning and partially, execution. Initiation phase in FORMAT methodology includes (Wysocki, 2011):

- recognition of DM's needs – guiding questions inside stage (FOR),
- précising how these needs will be fulfilled – what is the scope of the results of forecasting that will be useful for the DM
- formulation of the main question for forecasting
- acceptance from the DM to run a project – decision step inside stage (FOR)

Planning phase (Wysocki, 2011):

- definition of all tasks necessary to perform a project – framework designed by FORMAT
- scheduling tasks - framework designed by FORMAT
- definition of resources – done in cooperation with users and beneficiaries at session 1
- estimation of cost – calculated in man-hours of analysts work
- sequence of tasks – designed in FORMAT
- project schedule - framework designed by FORMAT
- risk management planning – basing on a checklist for FORMAT

- documentation of project planning – utilization of project management methods familiar for a client, preparation of project charter³,
- acceptance from the higher management to run the project

Execution phase – in FORMAT, it is performed in (FOR) stage; here execution is understood as execution of project management rules in order to run a forecasting project (Wysocki, 2011):

- setting up a working team – formulated in stage (FOR)
- project description record – preparation of stable material from stage (FOR), report while closing Gate (FOR)
- working rules inside the team – individual rules and schedule of working sessions designed by FORMAT
- communication inside team (rules) - formulated in stage (FOR)
- setting up a procedure of project scope modification – performed by next iteration
- final schedule form - formulated in stage (FOR)
- work packages set - framework designed by FORMAT

First three PMLC phases are considered by FORMAT methodology as setting up a project and they fit the stage (FOR), where 'execution' phase is a transition to core forecasting study. The following phase 'monitoring and control' surveys undergoing activities in stage (M), (A) and (T). 'Closing' process is associated particularly with stage (T).

Monitoring and control (PMI, 2013):

- coordination of changes across entire project
- scope change control
- schedule change control
- cost control
- quality control
- performance reporting
- risk monitoring and control

Closing:

- confirmation from client, (Wysocki, 2011)
- final reports, (Wysocki, 2011)
- how efficient we were during the entire project (Wysocki, 2011)
- Contract closeout – completion and settlement of the contract, including resolution of any open items (PMI, 2013)
- Administrative closure: generating, gathering and disseminating information for formalize phase or project completion (PMI, 2013)
- Compilation of lessons learned for use in planning future projects or phases. (PMI, 2013)

³ Project charter – a document issued by a project initiator or sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities (PMI, 2013).

Conclusion

FORMAT methodology includes a structure compatible with standard PMLC structure. As a result, it is recognizable by project managers and can be quickly formed into individual projects. Iterated PMLC is characterized by a semi-known method and a semi-known goal. As such, it is a part of agile structures that facilitate search for a solution by introduction of iterations.

Project planning features are already present in the FORMAT methodology. FOR stage supports a project manager in setting up project scope, description of initial conditions, objectives, goals and assessing risks. Project scheduling is imposed by the beneficiary organization.

Execution and monitoring phases of project management focus on stages (M) and (A) where the core of the forecasting project is built. Stage (T) contains activities that conclude the project.

In FORMAT methodology, in order to setup a forecasting project it is enough to carefully follow the steps of the methodology. Beginners in project management do not have to rely solely on their individual skills in project management. For experienced project managers (PM), content of initial stage of FORMAT methodology becomes a helpful checklist.

References

- PMI. (2013). A Guide to the Project Management Body of Knowledge: PMBOK Guide (5th ed., p. 589). Project Management Institute.
- Wysocki, R. (2011). *Effective Project Management: Traditional, Agile, Extreme* (6th ed., p. 816). Wiley.