Webinar 4

Methods and approaches towards project management.

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CASE – Center for Social and Economic Research

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Plan for today

- 0. Discussion of home exercises and questions/doubts.

- 1. What is a project management approach?

- 2. Process determined approaches (PMP, PRINCE2).

- 3. Systems thinking > Lean > Agile > Scrum.

- 4. Mixed approaches to project management.

- 5. Project Tailoring.

- 6. Common obstacles to successful project management.

- 7.Summary. Q&A session.

What is a project management approach?

is a set of rules and principles that guide your organisation in implementation of any project with optimum performance. In other words, this is a framework that provides necessary tools for management of a project in the best possible way.

Customize

There are no two exact projects.

Even using the same templates, goals and priorities it is possible to incur in challenges and risks. It is necessary to tailor the project to specific conditions.

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Why are there so many project approaches?

How to choose the best possible approach for your project and team?

- Cost – total amount of money needed to complete a project. What is a project budget (small, middle, large)? How many installments you will have? Is it possible to change the budget? Are any penalties for delays or poor quality?

- Scope – total amount of work needed to complete a project. What are the key objectives of a project? What are the major deliverables?

- Time – total amount of time needed to complete a project. What are the main project phases? When do you need to deliver a project task?

- Team – group of people that assure project implementation. How many people will work on a project? Are there any obstacles for engaging people at specific project phase?

- Risks – positive or negative events that can affect your project. What are internal or external events that can affect your project? Can we estimate a level of impact? What responses can minimise negative risks?

- Flexibility – tolerance to changes. Can we change the scope, time, or cost in a project?

- Stakeholders – direct or indirect beneficiaries of a project, people who will be affected by a project results. At what stages do we need to engage stakeholders? To what extent do we need to engage stakeholders? Who are a project's stakeholders?

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We can divide project management methodologies into two types

Waterfall

o PRINCE2,
o PMP,
o others;

Systems thinking > Lean > Agile > Scrum

o Systems thinking is a framework for seeing interrelations rather than things, for seeing patterns of change rather than statistic "snapshots", citation of Peter Senge;

o Lean is a learn-measure-build cycle which? continuously improves key processes;

o Agile – adaptation to changes, able to seize emerging opportunities;

Waterfall Methodology/1

Applies for projects with *predictive sequence of steps*, where each project phase starts after completion of the previous one and no possibility to go back to a previous stage (like swimming against a waterfall – tough and no fun).
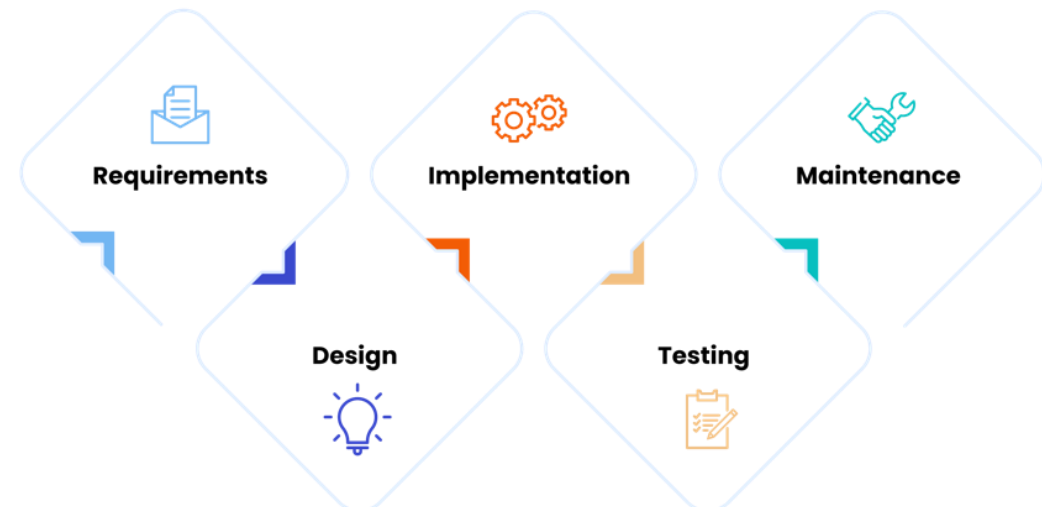
This approach does not tolerate unexpected changes or modifications during the project implementation. It can be used if the requirements are clear and well documented, the technology is mature, and if there is no room for flexibility.

The main areas where the waterfall methodology are applying are manufacturing, construction, repeatable services, any production of tangible products.

Waterfall Methodology/2

There are 5 fixed sequences:

- **Requirements**. Define the issue. Identify scope of issue and develop plan to tackle the issue. Study the issue in order to define requirements needed for solving it. Define "what"
- **Design**. Draft a solution based upon the requirements. Define "how"
- **Implementation**. Implement the solution based upon plan.
- **Testing**. Test the product to ensure the requirement have been satisfied.
- **Maintenance**.

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Waterfall Methodology/3

Advantages of Waterfall Methodology:

- <u>Clear rules</u>. As requirements documentation is developed at the initiation stage, everyone understands a project's goals and objectives.

- <u>Timing under control</u>. Starting and ending points of each phase are clearly defined, so it is easy to monitor progress and avoid "slippages".

- <u>No budget surprises</u>, unless you are failing in delivering agreed products. Usually, a contract prescribes all financial rules, including amount of money, number of installments, schedule of installments.

- <u>You get what you planned</u>. Big attention to documents means no surprises.

- <u>Minimal client involvement</u>, except at the initial and final stages. It limits possible communication failures.

Waterfall Methodology/4

Disadvantages of the Waterfall Methodology:

- Sometimes it's difficult to define all project's requirements at the initial stage.
- Lack of flexibility.
- Longer time of project implementation as each stage should start after completion of the previous one.
- Any changes are challenging.
- Limited engagement of clients into project implementation.

Waterfall Methodology/5

Use this approach if:

- Project objectives and goals are clearly defined and they are not going to change.
- Clients/stakeholders have a clear vision how the final product should look like and they will not change it.
- A project is consistent and predictable.
- A project requires comprehensive documentation and extensive project tracking.
- You would need to hire new people within a project midway and integrate them as quickly as possible.

Do not use this approach if:

- Project requirements are flexible and liable to change.
- There is no full picture of all requirements at the beginning of the project.
- Stakeholders should be engaged throughout the whole project. A product should be adapted in accordance with feedbacks during the project implementation.
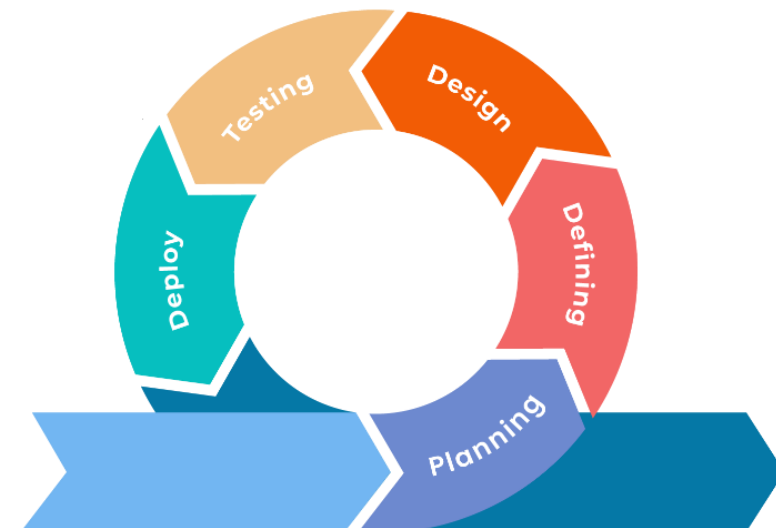
Agile/1

Agile is an iterative frameworks that helps teams to deliver a product faster, effectively respond to changes, and continuously improve a product delivery at each project stage. Agile aims to deliver the right product, with incremental and frequent delivery of small chunks of functionality, through small cross-functional self-organising teams, enabling frequent customer feedback and course correction as needed (Agile Manifesto).

Agile/2

The main stages of agile project lifecycle are:

- Requirement analysis. Development team together with stakeholders identify requirements, which are detailed and quantifiable
- Planning – once an idea is confirmed, project team jointly identifies end product features, priorities and assigns tasks to specific iteration.
- Design is prepared based on identified requirements, the project team decides on plan to proceed.
- Development of implementation – development features within scheduled iterations.
- Testing. Testing the product against accepted requirements in order to make sure the product is solving clients' needs.
- Deployment. Deliver the product to clients.

Agile/3

Advantages of Agile:

- Flexibility. Agile is suitable for changing and uncertain environment.

- Improved quality of a product. Delivering ready-to-release increment each iteration provides high quality results.

- In time delivery of what? due to short initial period and no breaks between project stages.

- More close collaboration with stakeholders allows to monitor the project progress and makes sure all tasks are completed according to plan.

Agile/4

Disadvantages of Agile:

- Lack of profound documentation leads to difficulties in introducing new people to the project.

- Less predictability. At the beginning of a project it is difficult to calculate accurately how much effort will be needed in order to deliver the product.

- Full time engagement. Project team should constantly interact with each other in order to meet client expectations.

- Less planning can easily put a project off track.

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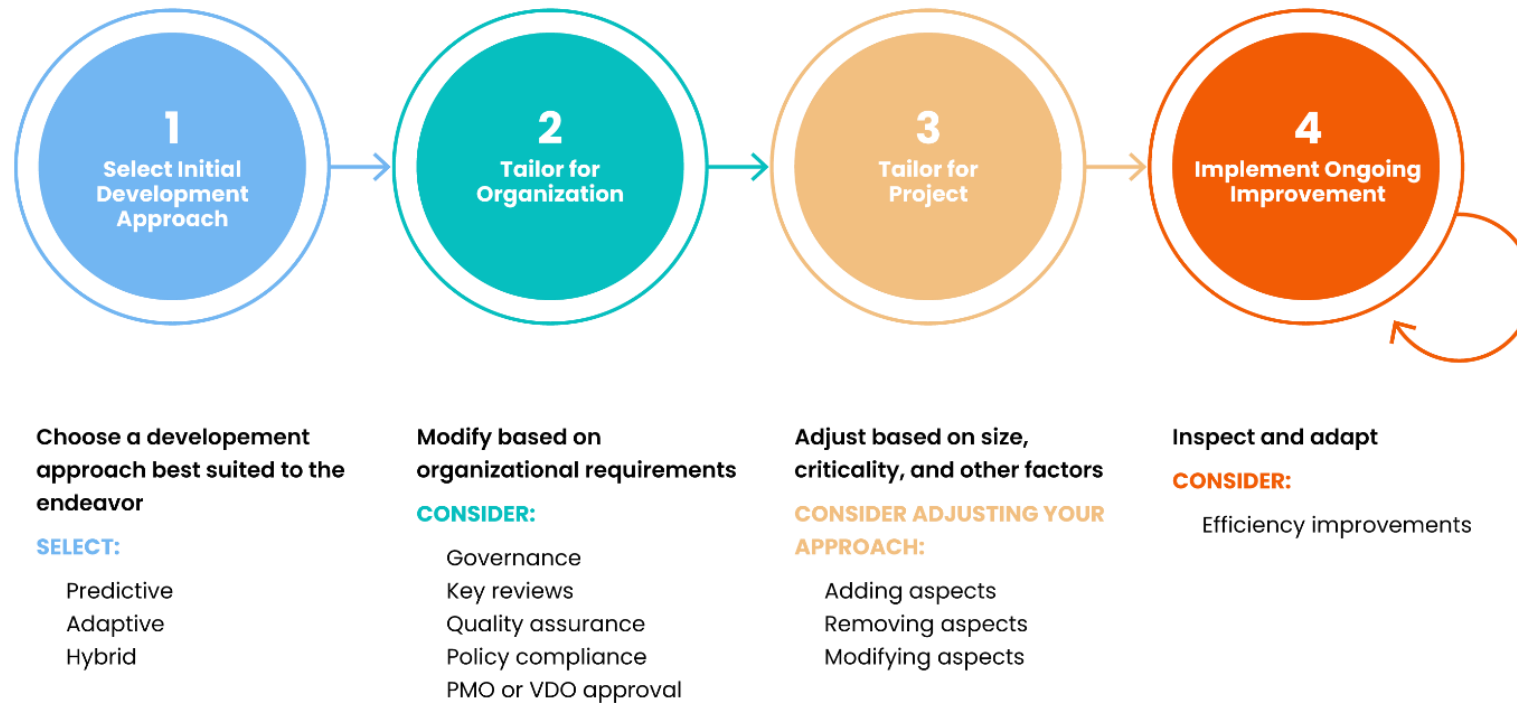
Agile/5

Use this approach if:
- A project should be flexible and requirements are going to be changed.
- At the initial stage there is no clarity how the solution will look like.
- A product should be delivered quickly.
- Stakeholders or clients should be involved in project implementation at every stage.

Do not use this approach if:
- A project requires a lot of documentation and you plan to engage new employees in the middle of a project.
- A project has predictable deliverables. Clients and project teams know clearly how the product will look like from the very beginning.
- A project cannot be changed during its course.
- Project team is not self-motivated.
- A project has strict rules and deadlines.

What is Project Tailoring?/1

Choose a developement approach best suited to the endeavor

SELECT:

Predictive
Adaptive
Hybrid

Modify based on organizational requirements

CONSIDER:

Governance
Key reviews
Quality assurance
Policy compliance
PMO or VDO approval

Adjust based on size, criticality, and other factors

CONSIDER ADJUSTING YOUR APPROACH:

Adding aspects
Removing aspects
Modifying aspects

Inspect and adapt

CONSIDER:

Efficiency improvements

What is Project Tailoring?/2

"Tailoring is determining the appropriate combination of processes, inputs, tools, techniques, outputs and lifecycle phases to manage a project"

It has to be chosen the right project management approach to successfully deliver a product. As every project is unique, project tools have to be adjusted to variables (time, scope, cost, etc.). Another option for tailoring is using ready and uniform approaches (available online for free) towards project management.

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Common obstacles to successful project management

Obstacles	Solutions
Lack of collaboration	Communication is paramount. Ensure good communication through setting up regular meetings/calls;
Poor work organisation	Set up a clear division of tasks and work flow, so everyone is aware about his/her responsibilities and deadlines.
Poor planning	Spend enough time studying potential risks and consulting stakeholders.
Shifting priorities	Keep project goals clear at each stage of the project.
Insufficient reporting	Make sure you are comparing "oranges to oranges" when reporting on your projects, use the same metrics throughout your project.

References:

- Project Management Institute, Inc. *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)–Sixth Edition*. 6th ed., Project Management Institute, 2017.
- Agile Manifesto, available at https://agilemanifesto.org/.