Agile Software Development

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Lecture 14

DSDM: Practices

DSDM Practices: Workshops

- Facilitated Workshop: A specialized type of meeting, with
  - Clear objective deliverables;
  - A set of participants chosen and empowered to deliver the required outcome;
  - A neutral facilitator to enable the effective achievement of the objectives.
- Roles involved:
  - Workshop Owner: Owns the objective that the workshop is aiming to achieve
  - Workshop Facilitator: Manages the process and dynamic of the workshop, enabling the participants to concentrate on the content and the deliverables
  - Participant: Needed to achieve the workshop's objective
  - Observer [Optional]: Gains from attending and hearing the discussions, but is silent and has no influence on or input into these discussions

Workshop Activities (1)

1. Define and plan the Workshop
   - The Owner, with support from the Facilitator, defines the objectives, nominates the Participants and agrees the form of the Workshop.
2. Prepare for the Workshop
   - The Facilitator circulates information to the Participants so that they understand the objective/background, and have time to prepare.
     - An agenda is sent, detailing when and where the Workshop will be held, who will be attending, the order of proceedings, and any pre-Workshop reading.
     - Individuals are advised where their input is needed so that they may prepare the information that they need to make an effective contribution.

Workshop Activities (2)

3. Facilitate the Workshop session:
   - Run the Workshop, based on previously-agreed ground rules:
     - Five-minute rule: Any disagreement that cannot be resolved in a period of five further minutes is parked as an 'open issue', to be resolved later;
     - Be on time - as timescales are constrained;
     - Respect the views of others;
     - One conversation at a time;
     - Each individual in the group has a responsibility to maintain focus;
     - Phones/technology off/silent.
   - Workshop retrospective
     - The effectiveness of the Workshop should be examined before the end of the session; any lessons learned are fed back into future Workshops.

Workshop Activities (3)

4. Document the outcome in a Workshop Report
   - Should be distributed very soon (within 48 hours) after the Workshop.
   - Sent to all Participants and other parties who will be affected by the output of the Workshop.
   - Should be brief and should document: Decisions, actions with action owners, open issues, output of the Workshop itself, and the process used.
   - Does not record minutes or verbatim statements.
5. Follow-up with post-Workshop actions and review
   - Satisfaction of the Workshop Owner with the results should be confirmed.
   - All actions marked for follow-up must be addressed, not just documented!
   - The responsibility for the actions lies with the Participants and the Owner.

DSDM Practices: MoSCoW Rules

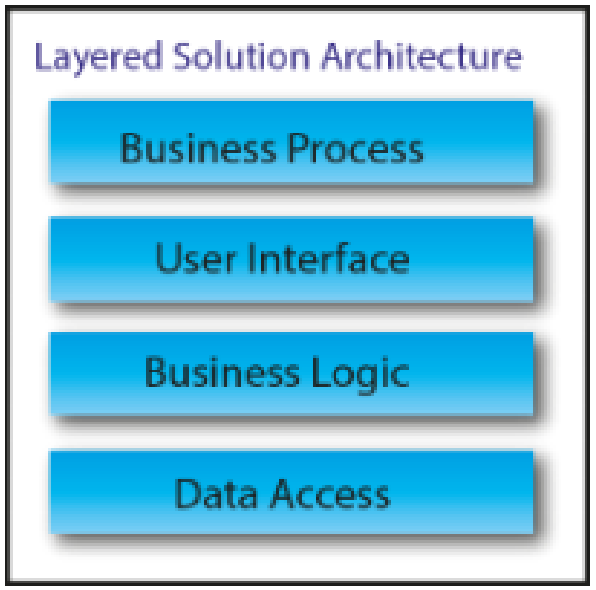
- Requirements are prioritized according to **M**o**SC**o**W** Rules, which categorize the requirements based on their business value:
  - **M**ust-Have: an essential requirement on which the project's success relies.
  - **S**hould-Have: an important requirement, but not essential to project's success.
  - **C**ould-Have: a requirement that can be excluded from the system functionality without having any serious effect on the project.
  - **W**on't-Have (this time): a requirement that will not be part of the system functionality in the current project.
- The project
  - must guarantee the implementation of the must-haves, which provide the Minimum Usable SubseT (MUST) of requirements ;
  - should strive hard to deliver the should-haves;
  - will implement the could-haves only if time and resources allow it.

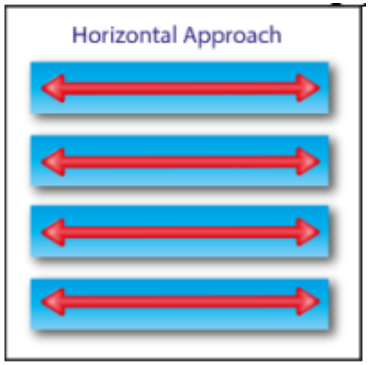
MoSCoW in Specific Timeframes

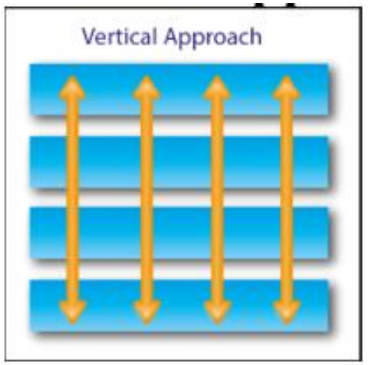
- Each requirement may have multiple levels of priority, based on timeframes:
  - MoSCoW for the project
  - MoSCoW for the Project Increment (Release)
  - MoSCoW for this Timebox
- As a minimum, priorities should be reviewed and revised at the end of each Timebox and each Project Increment.
- Allocation of requirements to timeframes:
  - Typically no more than 60% Must-Have effort (get the percentage of Must Haves to a level where the team's confidence to deliver them is high).
  - Typically around 20% Could-Have effort (to have a sensible level of contingency).

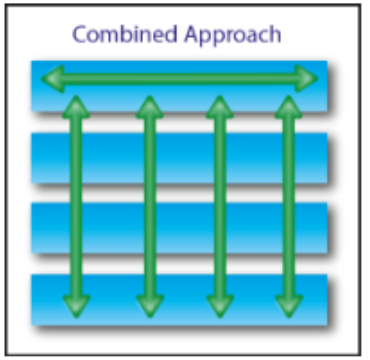
DSDM Practices: Iterative Development

- During Foundations, a strategy is specified for iterative development:
  - Requirement focus: Iterations focus on evolving the solution to meet one or more requirements (Functional, Usability, Non-functional).
  - Solution focus: Iterations deliver parts of the solution based on its architecture (horizontal slices, vertical slices, or a combination of the two).









[DSDM Consortium 2014]

Iterative Development: Quality Assurance

- The level of quality is defined in the early lifecycle phases, and is then measured and controlled during iterative development by using:
  - Quality criteria
  - Acceptance criteria
- Continuous validation is performed naturally through direct involvement of Business Ambassador and Business Advisor roles.
- Continuous verification is performed through applying:
  - Static verification (reviews)
  - Dynamic verification (testing)

DSDM Practices: Modeling

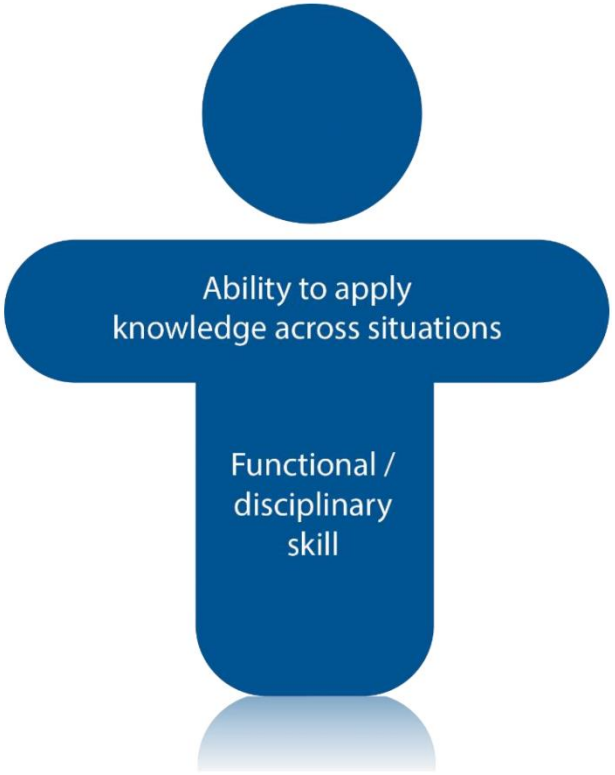
- Modeling is intended to support effective communication.
- Models should be developed iteratively, taking a top-down approach through to the detail and modeling from different perspectives.
  - Models should always be an aid and never a bureaucratic overhead.
  - The choice of model depends on the audience: use models that they understand.
- DSDM does not advocate any particular modeling techniques:
  - Do what works for the project and the organization; capitalize on existing skills.
  - Use diagrams and models to establish a common language between the teams.
  - Do enough appropriate modeling and no more.
- Modeling helps people visualize complex things:
  - Models can help clarify the overall picture at a high level.
  - Models can help break down the project into comprehensible blocks of work.

DSDM Practices: Collaboration and Communication

- Communication choices:
  - **Face-to-Face:** Enables the rationale behind decisions to be understood, and allows immediate clarification of misunderstandings.
  - **Video Conferencing:** If those involved cannot physically get together, this is often the next most effective channel.
  - **Chat Facilities:** For quick interchange of short pieces of information.
  - **Email:** Effective for confirming what has been previously agreed and also for broadcasting information to a large group.
  - **Collaborative Workspaces:** Effective for communicating informally within a team, as it uses words, models, and pictures.
  - **Documents:** Effective for capturing and managing more formal information and artefacts which need to be shared and managed.
- Two means are prescribed for sharing information effectively on a day-to day basis: **Team Boards** and **Daily Stand-ups**.

Collaboration and Communication: Encouraging Collaboration

- Effective collaboration works best where individuals possess T-shaped skills:
  - Having a deep knowledge of their own discipline (vertical part of the T);
  - Understanding how their discipline interacts with others (horizontal part of the T).



[DSDM Consortium 2014]

Collaboration and Communication: Team Collaboration

- The cornerstone of team collaboration is having a single shared goal and ensuring this goal is visible to the whole team.
- A **supportive culture** is required:
  - This provides members of the team with the confidence and trust to be open and honest, and thus ensures that issues are raised early.
  - It means that there is recognition that mistakes do happen but that lessons are learnt and the team ensures that they are not repeated.
  - A **blame culture** is the antithesis of a supportive culture; where a blame culture exists, it prevents honesty, and results in behaviors such as:
    - Spending time and effort shifting responsibility or preparing a defense in case problems arise in the future, rather than simply sorting the problem out now.
    - Hiding a problem, in the hope that it will be resolved before anyone finds out.
    - Overestimating the time needed for tasks, to avoid the perception of "failure".

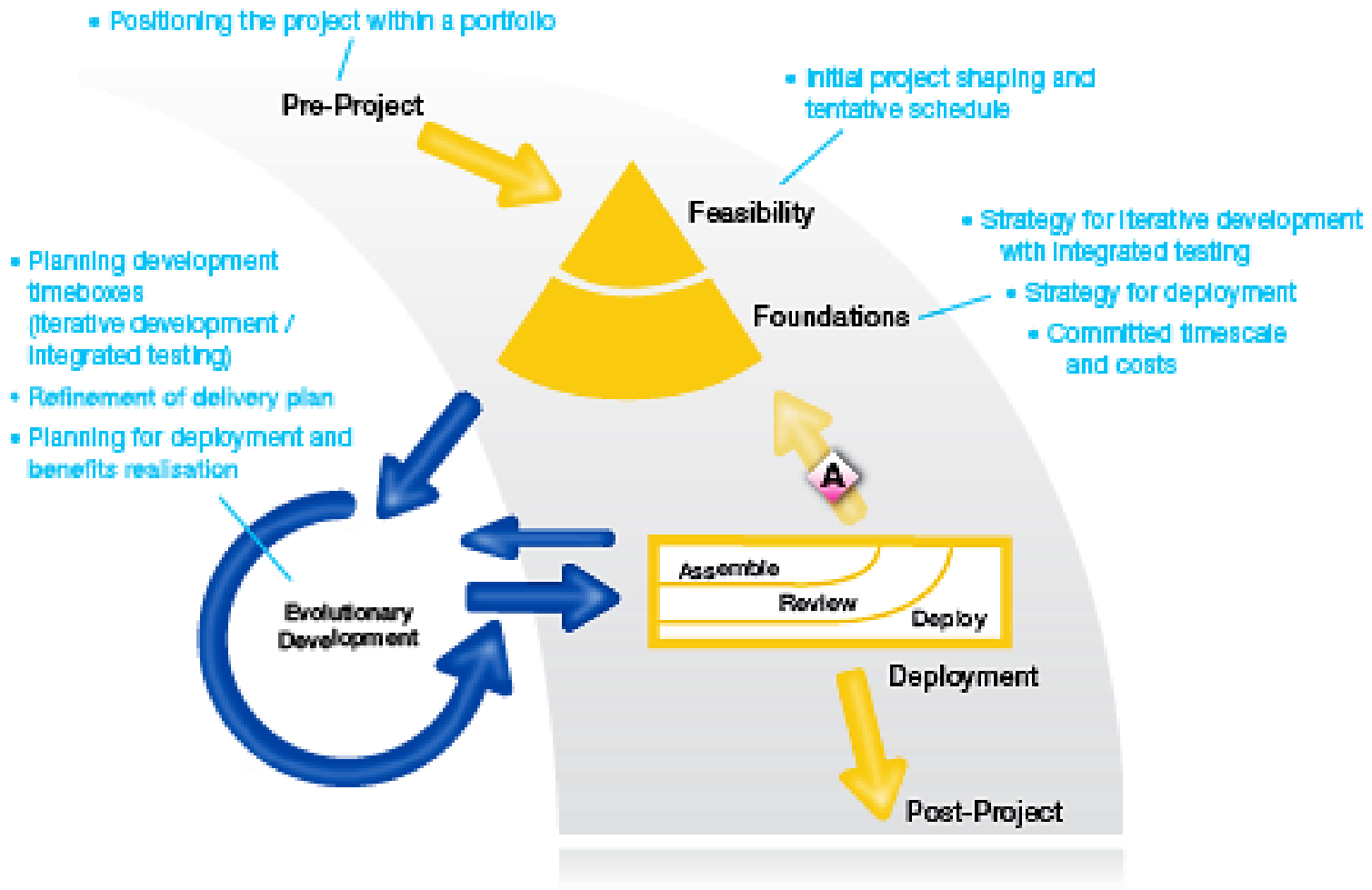
DSDM Practices: Requirements Engineering

- No format is enforced for requirements, but using User Stories is preferred.
- Relevant agile practices are extensively used (e.g., Three C's and INVEST).
- During **Feasibility**, a small number (typically less than 10) of clear Epic-size user stories (just sufficient to scope the project) are identified.
- During **Foundations**, more understanding of the requirements is needed to clarify the scope of the project, and to formulate a realistic Delivery Plan.
  - High-level Epics are broken down into Features (Themes) and even finer-grained workable user stories (functional and non-functional).
  - Decomposition should be just enough to allow reliable estimation in order to plan the first few timeboxes of the first release.
- During **Evolutionary Development**, through the direct involvement of the Business Analyst:
  - At the outset of each timebox, the user stories allocated to that timebox are investigated and broken down into detailed workable user stories.
  - New requirements emerge which were not identified during Foundations.

DSDM Practices: Project Planning and Control

- DSDM puts great emphasis on planning, especially high-level planning.
  - The Project Manager is responsible for high-level planning, planning for incremental delivery of the solution – as required by the Business Sponsor.
  - The SDT is responsible for planning the detail of each Timebox, with members agreeing on who will do what to achieve the objectives agreed at the Kick-off.
- The two plans defined by DSDM cover two different planning horizons:
  - Delivery Plan looks to a horizon of the end of the project – which will probably be months or sometimes even years in the future.
  - Timebox Plan looks to a horizon of the end of a Timebox – typically no more than 4 weeks into the future.
- The level of detail in the two plans is also quite different:
  - Delivery Plan provides a schedule of Timeboxes for the imminent release (a horizon of 6 weeks to 6 months), and objectives and delivery dates for the rest.
  - Timebox Plan provides task-level detail of exactly who does what and when.

Project Planning and Control: A Process View



[DSDM Consortium 2014]

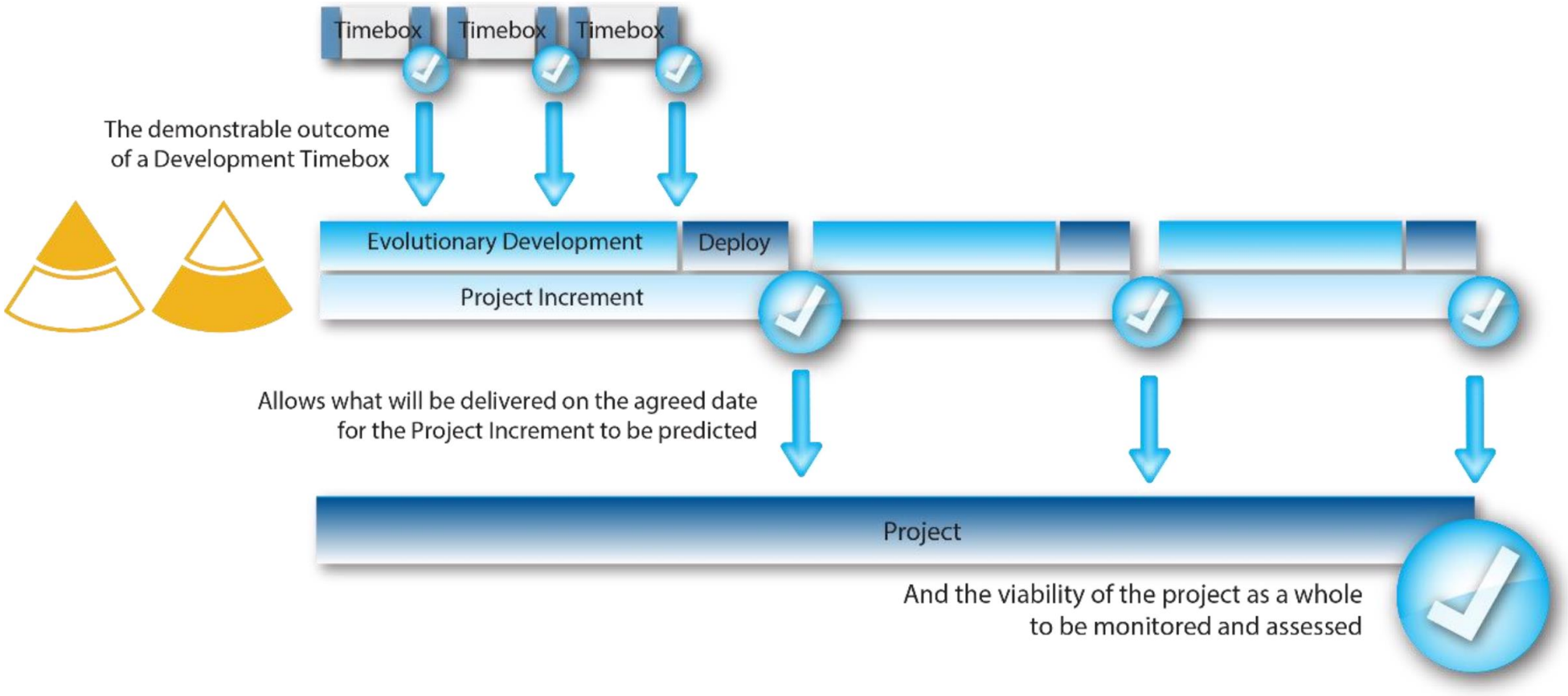
Project Planning and Control: Plan Development (1)

1. **Planning during Pre-Project**
   - Planning Pre-Project is carried out at the programme/portfolio level and is focused on when the Feasibility for the project will be assessed.
2. **Planning during the Feasibility phase**
   - Planning in detail for the next phase, the Foundations.
   - Providing an approximation of the size and duration of the overall project.
   - Delivery Plan describes the next few weeks (Foundations) in detail, provides an outline for the first release, and lists the dates for deployment of later releases.
3. **Planning during the Foundations phase**
   - Detailing the Delivery Plan by adding a schedule of Timeboxes for the first release along with the resources required.
   - Defining the approaches to be used across the project for developing and controlling the development of the solution.
   - Agreeing a strategy for deployment.

Project Planning and Control: Plan Development (2)

4. **Planning Timeboxes during the Evolutionary Development phase**
   - Timebox planning is carried out by the SDT at the beginning of each Timebox.
   - Timebox Plan is based on task estimates; it is typically captured on a Team Board.
   - Timebox Plan should also indicate who is responsible for doing what work.
   - The Team Leader is responsible for ensuring that all the work is covered by the plan and that resources are sufficient to do the work agreed.
   - The Team Leader is also responsible for bringing to the attention of the Project Manager any significant issues that may jeopardize the plan.
5. **Planning For Deployment during Evolutionary Development**
   - As the detail of the solution emerges during the Evolutionary Development phase, detailed plans for deployment of the solution are added to the Delivery Plan.
6. **Planning for Post-Project benefits assessment**
   - During the last increments of the final release, the activities needed during Post-Project to measure the benefits of the solution are planned.

Project Planning and Control: Outcome-Based Measurement

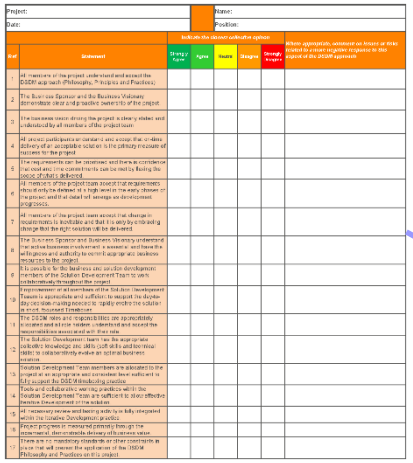


[DSDM Consortium 2014]

DSDM Practices: Tailoring DSDM

- A Project Approach Questionnaire (PAQ) is used to identify areas where a project or its environment is not ideally suited to the DSDM approach.
  - It comprises 17 statements about the project on which the stakeholders state their opinions.
- If, on collaborative completion of the PAQ, everybody either Strongly Agrees or Agrees with every statement, then the risk of using DSDM is low.
- If there is disagreement with any of the statements, then there is probably some risk in trying to use DSDM straight out of the book.
  - In some cases, corrective action is all that is required to deal with the risk.
  - In other cases, the risk raised may be difficult or impossible to resolve.
- DSDM's Tailoring practice explains the PAQ and how it can be used:
  - each of the statements in the PAQ and their importance to the success of the approach are explained;
  - hints and tips towards resolving the issue of disagreement with each statement are provided.

Tailoring DSDM: Project Approach Questionnaire (PAQ)



Project:		Name:
Date:		Position:

		Indicate the closest collective opinon					Where appropriate, comment on issues or risks related to a more negative response to this aspect of the DSDM approach
Ref	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
1	All members of the project understand and accept the DSDM approach (Philosophy, Principles and Practices)						
2	The Business Sponsor and the Business Visionary demonstrate clear and proactive ownership of the project.						
3	The business vision driving the project is clearly stated and understood by all members of the project team						
	All project participants understand and accept that on-time						

[DSDM Consortium 2014]

References

- DSDM Consortium, *The DSDM Project Framework Handbook.* Agile Business Consortium, Published online at: https://www.agilebusiness.org/dsdm-project-framework.html, 2014 (visited: 14 September 2024).

- Moran, A., *Managing Agile: Strategy, Implementation, Organisation and People*, Springer, 2015.