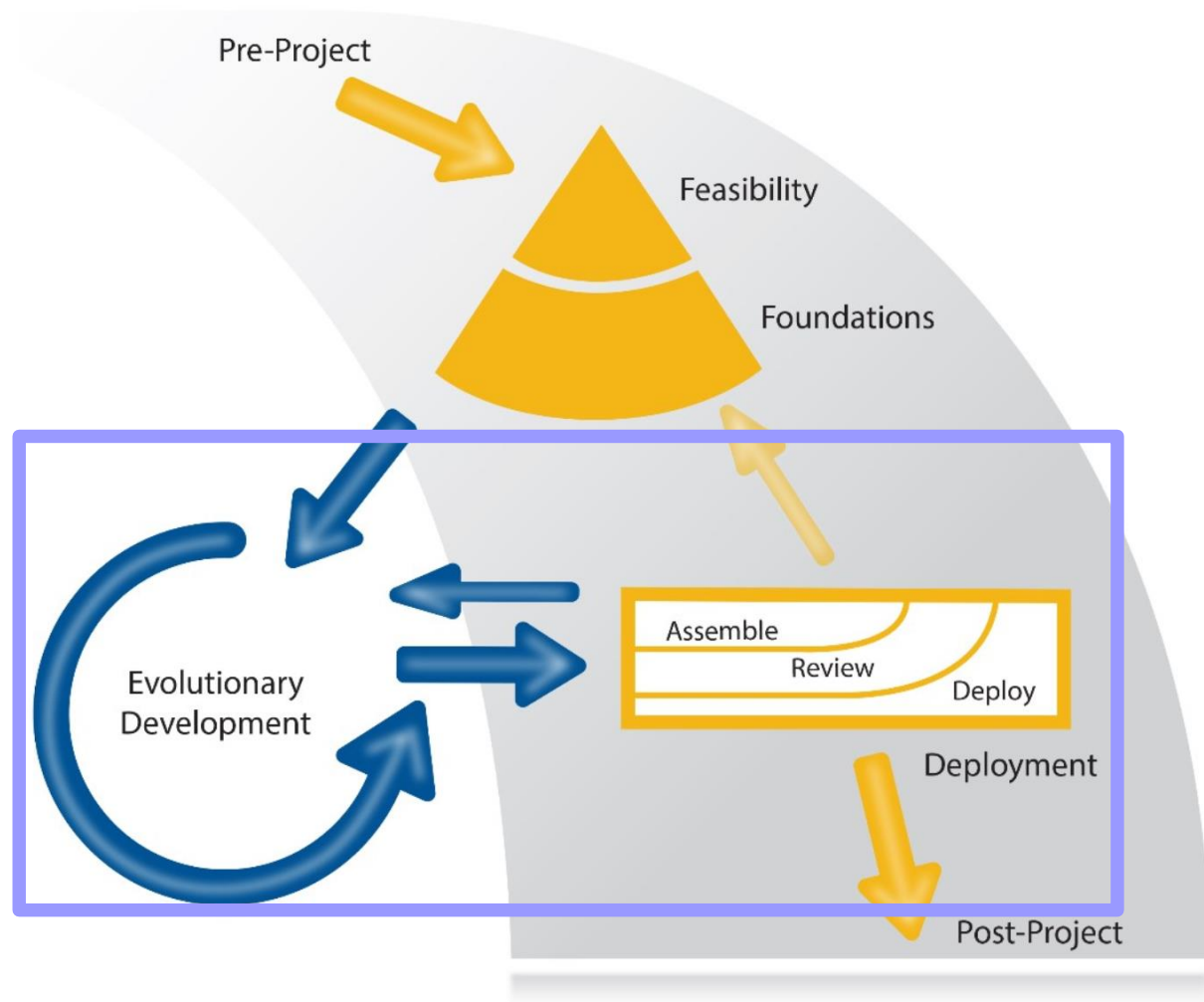# Agile Software Development

Lecturer: **Raman Ramsin**

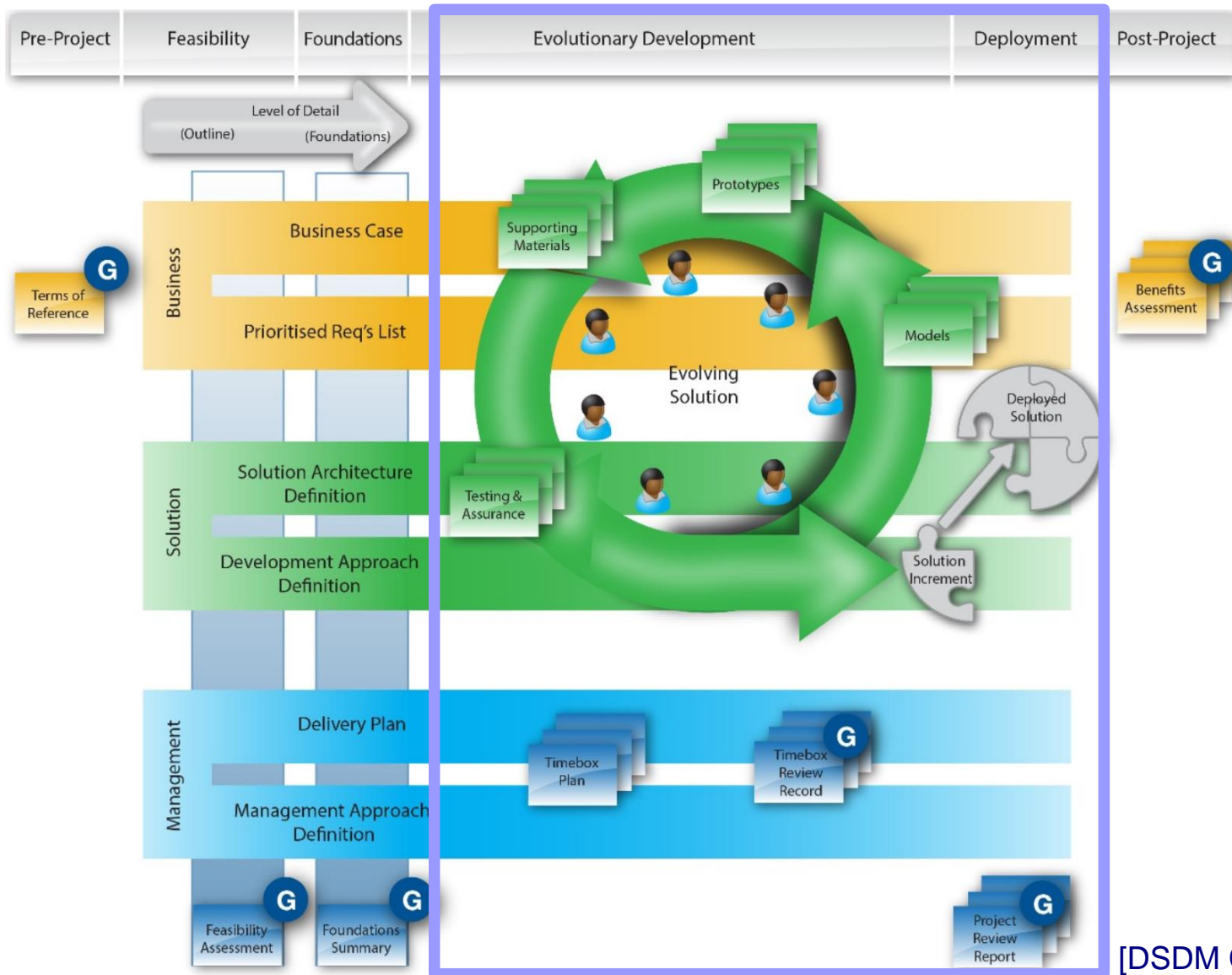**Lecture 13**

**DSDM: Iterative Phases**

# DSDM: Process



[DSDM Consortium 2014]

# DSDM: Products



[DSDM Consortium 2014]

# DSDM Process: Evolutionary Development Phase

- Inputs:
  - ☐ Evolutionary Documents: <u>Business Case</u>, <u>Prioritized Requirements List (PRL)</u>, <u>Solution Architecture Definition (SAD)</u>, <u>Development Approach Definition (DAD)</u>, <u>Delivery Plan</u>, <u>Management Approach Definition (MAD)</u>
- Goal: Creating Solution Increments that meet the business need and are technically sound; the <u>practices</u> applied include:
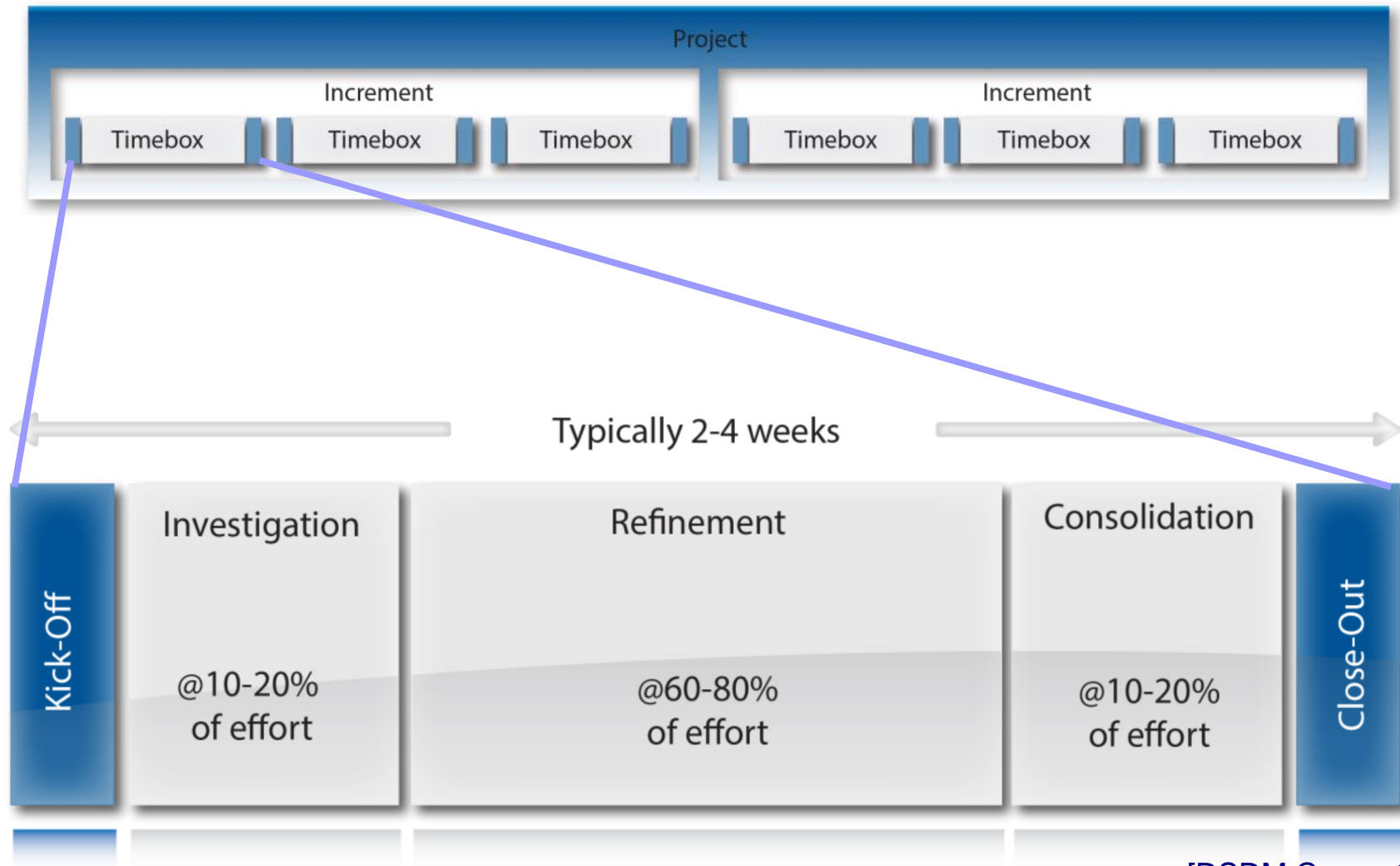  1. Iterative Development
  2. Timeboxing
  3. MoSCoW Prioritization
  4. Modeling
  5. Facilitated Workshops
- Outputs:
  - ☐ <u>Updated versions of Evolutionary Documents</u>
  - ☐ <u>Evolving Solution</u>

# Evolutionary Development Phase: Timeboxes

**Sharif University of Technology**

5

# Timebox Activities: Kick-Off

- Short session: Takes around 1-3 hours for a 2-3-week timebox.
- Attended by the SDT, Project Manager, Technical Coordinator and Business Visionary.
- Activities:
  - Reviewing timebox objectives, as outlined in the Delivery Plan, to gain a common understanding of what is to be achieved
  - Ensuring that it is still feasible within the timebox to deliver what was initially expected, and to re-plan if this is no longer possible
  - Agreeing acceptance criteria for each product to be delivered in the timebox
  - Reviewing the availability of all SDT members to participate in this timebox
  - Highlighting any known dependencies that may affect this timebox:
    - Internal: other SDTs on this project working concurrently in parallel timeboxes
    - External: people/projects outside the team's control that may impact this project

# Timebox Activities: Investigation

- Details the requirements agreed for the timebox and their acceptance criteria.
- An initial model/prototype of the solution may be created to demonstrate the requirements and also to attain feedback.
- At the end of Investigation the whole SDT review the following:
  - ☐ Dependencies (internal and external)
  - ☐ Timebox Plan (reviewing the work still to be done, and agreeing which members of the team will be working on what)
  - ☐ Risks
- Feedback from this review is captured as a Timebox Review Record (can be as simple as an email, confirming what has been agreed).

7

# Timebox Activities: Refinement

- The aim of Refinement is to complete as much of the development work as possible, including testing the products.

- The primary objective is to meet the detailed acceptance criteria previously agreed, and also to focus on the current business need.

- Ends with a review with the Business Ambassador(s) and other stakeholders, such as Business Advisors and Business Visionary.
    - Would typically involve a demo of the product developed within the timebox.
    - Determines what actions are necessary to achieve full completion of the work, according to the acceptance criteria, by the end of the timebox.
    - Changes requested at this time (fixing minor outstanding issues) are carefully considered and prioritized.
    - Feedback from this review is captured as a Timebox Review Record.

8

Sharif University of Technology

# Timebox Activities: Consolidation

- Actions agreed at the Refinement review are carried out, together with final testing and any work required to satisfy the standards.

- Any final quality control checks are carried out by the SDT to ensure all products meet the business need to an acceptable quality.

- Ends with a review to check whether the timebox objectives have been met.

- Any products not meeting the agreed acceptance criteria by this point are deemed not to have been delivered.

  - ☐ Undelivered products remain open on the Prioritized Requirements List.

Sharif University of Technology

# Timebox Activities: Close-Out

- Short session: Takes around 1-3 hours for a 2-3-week timebox.

- The primary aim is formal acceptance of the timebox deliverables by the Business Visionary and Technical Coordinator.

- An important secondary aim is to determine what is to be done about work that was not completed. Such work may be:

  - ☐ Considered for the next timebox

  - ☐ Scheduled for some point later in the Project Increment or project

  - ☐ Dropped from the Project Increment or project

- Includes a short timebox retrospective workshop, to learn from the timebox and to take actions to improve future timeboxes.

Sharif University of Technology

# Daily Stand-Up Meetings

- SDT's opportunity to share information and to do any day-to-day re-planning and reorganizing necessary when issues occur.
- Takes place at the same time each day (with the Timebox Plan visible).
- Normally facilitated by the Team Leader; takes no longer than 15 minutes.
- Attended by all members of the SDT, and any Business Advisors and Technical Advisors actively involved in this timebox.
  - ☐ May be attended by other roles in order to observe progress and pick up escalated issues.
- Each participant in turn describes:
  - ☐ What I have been doing since the last stand-up that helps achieve the timebox objectives.
  - ☐ What I will be doing until the next stand-up to help achieve the timebox objectives.
  - ☐ What problems I have that will prevent me or the team from achieving the objectives.
- Ideally held with participants standing in a circle by their Team Board.
- Should not attempt to solve the problems; problems are taken off-line.

# Evolutionary Development Phase: Evolving Solution

- **Made up of:**
  - ☐ all appropriate components of the final solution
  - ☐ any intermediate deliverables necessary to explore the detail of requirements and the solution under construction
- **Including: Software components, models, prototypes, supporting materials and testing/review artefacts.**
- **Produced by: Solution Development Team**
- **Produced for:**
  - ☐ Business Sponsor
  - ☐ Solution Participants (users of the end-products of the project)
- **Approved by: Business Visionary and Technical Coordinator**

Sharif University of Technology

# Evolutionary Development Phase: Timebox Plan

■ Provides detail for each Timebox in the Delivery Plan.

■ Elaborates on:

  ☐ objectives of the Timebox

  ☐ deliverables of the Timebox

  ☐ tasks to produce the deliverables

  ☐ resources required to do the work

■ Shown on a Team Board as work <u>to do</u>, <u>in progress</u>, and <u>done</u>.

■ Updated at least on a daily basis at the Daily Stand-ups

■ Produced by: Solution Development Team

■ Produced for: Solution Development Team

■ Approved by: Project Manager and Technical Coordinator

# Evolutionary Development Phase: Timebox Review Record

- Captures the feedback attained from each review conducted during the Timebox.
- Produced by: Team Leader
- Produced for:
  - ☐ Project Governance Authority
  - ☐ Project Manager
- Approved by:
  - ☐ Business Visionary
  - ☐ Technical Coordinator

# Evolutionary Development Phase: Project Review Report

- **A single document that is updated at the end of each Project Increment by adding new sections pertinent to that Increment.**
  - ☐ Captures the feedback from the review of the delivered solution and confirms what has been delivered and what has not
  - ☐ Captures learning points from the retrospective
  - ☐ Describes the business benefits that should now accrue through the proper use of the solution delivered so far
- **Produced by: Project Manager**
- **Produced for: All project participants and stakeholders**
- **Approved by:**
  - ☐ Business Visionary
  - ☐ Technical Coordinator
  - ☐ Team Leader

# DSDM Process: Deployment Phase

- **Inputs:**
  - ☐ Evolutionary Documents: <u>Business Case</u>, <u>Prioritized Requirements List (PRL)</u>, <u>Solution Architecture Definition (SAD)</u>, <u>Development Approach Definition (DAD)</u>, <u>Delivery Plan</u>, <u>Management Approach Definition (MAD)</u>
  - ☐ <u>Evolving Solution</u>
- **Goal:** Bringing the Evolving Solution into operational use
- **Stages:**
  1. Assemble
  2. Review
  3. Deploy
- **Outputs:**
  - ☐ <u>Updated versions of Evolutionary Documents</u>
  - ☐ <u>Deployed Solution</u>

# Deployment Phase: Assemble

- **Solution Increments are assembled into a single release.**

- **May also include bringing together any relevant supporting information; e.g.,**

  - ☐ a new business process

  - ☐ a schedule of training

  - ☐ user guides

  - ☐ Support and maintenance plans

# Deployment Phase: Review

- Ensures the proposed release meets the appropriate standards and is complete enough to be viable.

- Provides "approval to deploy".

- In a simple environment, it can be based on a basic checklist.

- In a more complex environment, it may be as formal as a go/no-go checkpoint workshop.

- A retrospective is also carried out for the release, focusing on ways of working and areas for improvement.

# Deployment Phase: Deploy

- **The physical act of putting what has been assembled (the release) into operational use.**

- **Includes:**

  - ☐ Any technical work, such as transfer of the solution into the live (production) environment

  - ☐ Enactment of any plans for business change

- **After the final Deployment, the project is formally closed.**

  - ☐ The whole team hold a retrospective for the overall project, both from the technical/process perspective and from the business perspective.

  - ☐ Analogous to a post-mortem review.

# Post-Project Phase: Benefits Assessment

- Describes how the benefits have actually accrued, following a period of use in live operation.
- Usually, a number of Benefits Assessments are produced on a periodic basis.
- Produced by:
  - ☐ Business Visionary
  - ☐ Business Analyst
- Produced for: Project Governance Authority
- Approved by: Business Sponsor

Sharif University of Technology

# Sequential Phases: RACI Chart of Roles and Products
RACI: Responsible, Accountable, Consulted, Informed

| | Terms of Reference | Business Case | Prioritised Requirements List | Solution Architecture Definition | Development Approach Definition | Delivery Plan | Management Approach Definition | Feasibility Assessment | Foundations Summary | Evolving Solution | Timebox Plan | Timebox Review Record | Project review Report | Benefits Assessment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Business Sponsor | A | A | | | | I | A | A | A | I | | I | I | A |
| Busines Visionary | | C | A | A | | A C | C | C | C | A | A | A | A | R |
| Business Advisor | | (C) | C | C | C | C | I | C | C | C | C | C | C | |
| Technical Coordinator | I | C | | R | R | A C | C | C | C | A | A | A | A | |
| Technical Advisor | | (C) | | C | C | C | I | C | C | C | C | C | C | |
| Project Manager | | C | | A | A | R | R | R | R | I | A | I | R | |
| Business Analyst | I | R | R | R | | C | I | C | C | C | I | C | C | R |
| Business Ambassador* | | | C | | | | | | | | | | | |
| Solution Development Team | | I | I | C | I | C | I | C | C | R | R I | C | C | |
| Team Leader* | | | | | | | | | | | | R | A | |
| DSDM Coach | | | | | C | | C | C | C | C | | | C | |
| Project Governance Authority | I | I | | | I | I | I | I | I | | | I | I | I |
| Anybody | R C | | | | | | | | | I | | | | C |

* Where different to collective responsibility of the Solution Development Team

[Moran 2015]

# *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.