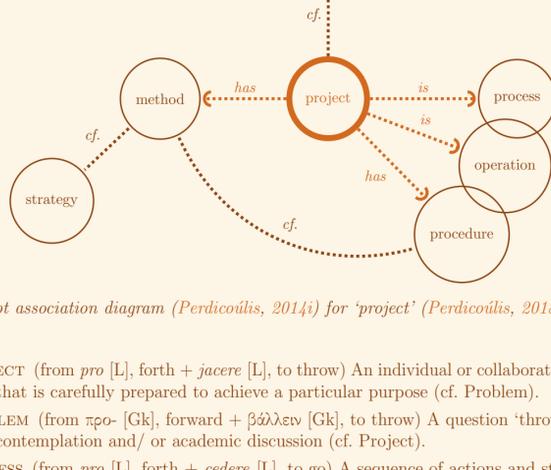


Note

Human activities in domains such as science, engineering, or art (Perdicoulis, 2014d,e) are conveniently organised in operational units known as ‘projects’. The management of projects is a valuable skill that matures with experience (Perdicoulis, 2014g), and as such better suited for guidance (Perdicoulis, 2011, 2018) rather than standardisation (ISO, 2012).

1 Concepts



Concept association diagram (Perdicoulis, 2014i) for ‘project’ (Perdicoulis, 2018, 2014c)

**PROJECT** (from *pro* [L], forth + *jacere* [L], to throw) An individual or collaborative undertaking that is carefully prepared to achieve a particular purpose (cf. Problem).

**PROBLEM** (from *προ-* [Gk], forward + *βάλλειν* [Gk], to throw) A question ‘thrown forward’ for contemplation and/ or academic discussion (cf. Project).

**PROCESS** (from *pro* [L], forth + *cedere* [L], to go) A sequence of actions and states.

**PROCEDURE** (etymology: same as Process) A spyned, particular, established, or official way of carrying out an activity or operation; synonym of method.

**OPERATION** (from *opus* [L], work) An organised activity involving a number of people; more technically, a managed process, whose protocol is known as a ‘procedure’. The ‘actions and states’ of the more general process are often referred to as ‘tasks and stages’ in operations.

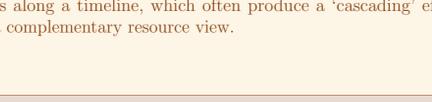
**METHOD** (from *μετά* [Gk], after, behind + *οδός* [Gk], way, path; literally, ‘returning to the [known] path’ or ‘marking the path [for finding it again]’) An established procedure for doing something within a known context (cf. Strategy).

**STRATEGY** (from *στρατός* [Gk], army + *άγειν* [Gk], leading [the army — i.e. in new and unknown conditions]) An action proposed to achieve an intended outcome; strategy is high-level and abstract, condensed, or generalised action; strategy is pioneering action, confronting novel situations and unexplored grounds; therefore, it contains risks and can follow no pro-forma instructions (methods or ‘recipes’).

2 Process

2.1 Sequence

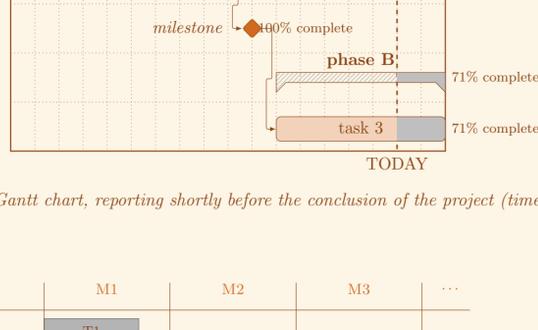
The operational part of projects can be represented as sequences of actions (a.k.a. tasks) and states (e.g. milestones) in process diagrams (Perdicoulis, 2015f, 2014i).



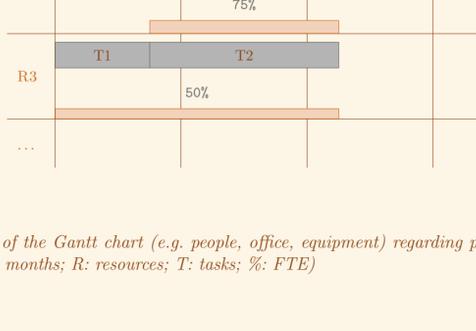
A project process in two alternative CPD configurations (Perdicoulis, 2014i, 2015f)

2.2 Cascade

Gantt charts (Perdicoulis, 2014a) are specialised process diagrams organising tasks and milestones with dependencies along a timeline, which often produce a ‘cascading’ effect. They may be accompanied by a complementary resource view.



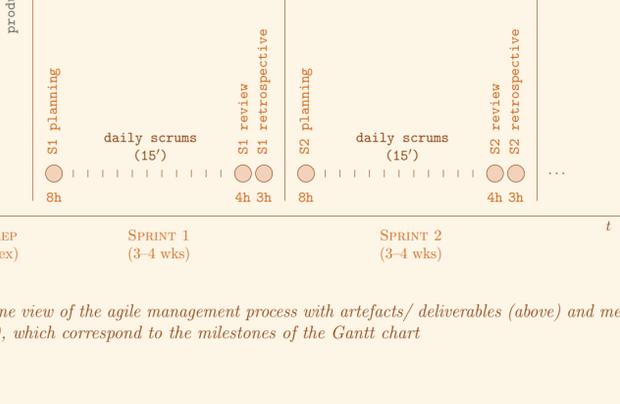
Task view of a Gantt chart, reporting shortly before the conclusion of the project (timeline in weeks)



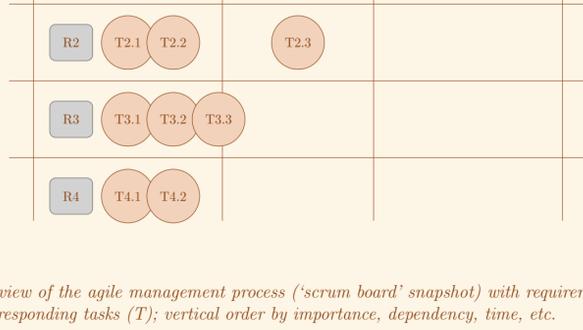
Resource view of the Gantt chart (e.g. people, office, equipment) regarding participation and occupation (M: months; R: resources; T: tasks; %: FTE)

2.3 Agile

Agile project management techniques such as *Scrum* (Schwaber and Sutherland, 2013) feature long sequences (e.g. sprints) with pre-scheduled meetings (e.g. planning, review, retrospective, ‘scrums’), seeking ‘realistic creativity’ through frequent revisions while generally keeping away from fixed plans, contracts, processes, and documentation (Agile Manifesto, website).



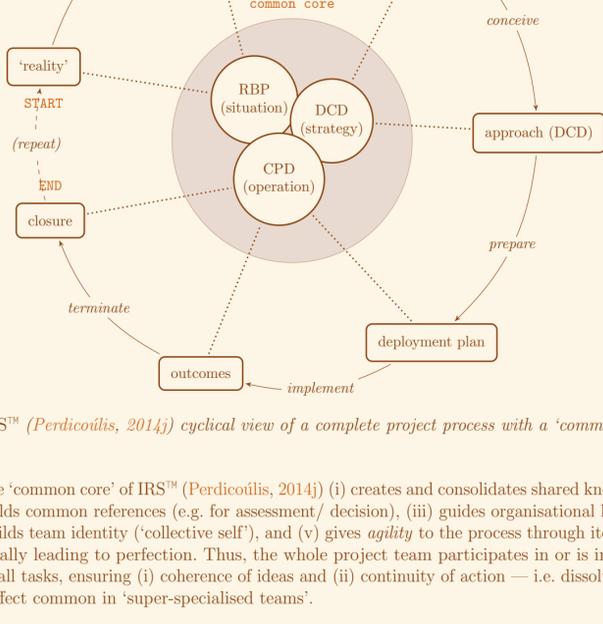
Timeline view of the agile management process with artefacts/ deliverables (above) and meetings (below), which correspond to the milestones of the Gantt chart



Action view of the agile management process (‘scrum board’ snapshot) with requirements (R) and corresponding tasks (T); vertical order by importance, dependency, time, etc.

2.4 Cycle

The *Iterative Refinement Schema™* (IRS) of *Systems Planning™* employs a cyclical process to facilitate improvement through iterations (Perdicoulis, 2015e), but with the special feature of a ‘common core’ (Perdicoulis, 2014j).



An IRS™ (Perdicoulis, 2014j) cyclical view of a complete project process with a ‘common core’

The ‘common core’ of IRS™ (Perdicoulis, 2014j) (i) creates and consolidates shared knowledge, (ii) builds common references (e.g. for assessment/ decision), (iii) guides organisational learning, (iv) builds team identity (‘collective self’), and (v) gives *agility* to the process through iterations, eventually leading to perfection. Thus, the whole project team participates in or is informed about all tasks, ensuring (i) co-creation of ideas and (ii) continuity of action — i.e. dissolving the ‘silo’ effect common in ‘super-specialised teams’.

3 Management

3.1 Commitments

CLASSIC Tasks; milestones (e.g. meetings, prototypes)  
AGILE Administrative meetings (e.g. scrums); development cycles (e.g. sprints)

3.2 On-the-fly alterations

CLASSIC Team composition; task assignments; overtime  
AGILE Requirements (e.g. scope, specifications); tasks (e.g. parallel, skip, pause)

4 Documentation

4.1 Classic Method

- PILOT STUDY Register of an original exploration towards a new project . . . . . INT
- PROJECT CHARTER Summary proposal for a new project, subject to approval . . . . . INT
- MEMORANDUM OF UNDERSTANDING Terms of collaboration for mutual reference . . . . . INT
- PROJECT MANAGEMENT PLAN Detailed guidance for the deployment of a project . . . . . INT
- PROJECT MEMO Communication of upcoming events, changes, or observations . . . . . INT
- PROJECT LOG Detailed register of events during the execution of the project . . . . . INT
- PROJECT REPORT Global register, produced upon completion of a project . . . . . INT/EXT
- GANTT CHART (§ 2.2) Process diagram (e.g. tasks, milestones, resources) . . . . . INT

4.2 Agile Method

- BACKLOG ‘To-do’ items (e.g. requirements, tasks) per project or sprint
- PROJECT LOG Register of meetings (e.g. date, duration, participants)
- BURNDOWN CHART ‘X-Y’ progress graph, depicting ‘to-do’ tasks along time
- SCRUM BOARD/ KANBAN Project monitor with ‘to-do’, ‘doing’, and ‘done’ columns (§ 2.3)
- SPRINT REVIEW REPORT Factual/ objective report by the end of each sprint
- SPRINT RETROSPECTIVE REPORT Assessment report by the end of each sprint

5 Assessment

EX-ANTE ASSESSMENT in a number of perspectives — e.g. legal, financial, operational, environmental (Perdicoulis, 2015c, 2017)

EX-POST ASSESSMENT against previously defined and agreed-upon references — e.g. appropriateness (Perdicoulis, 2014h, 2017), ‘success’, performance, efficiency (Perdicoulis, 2014f); cf. agile artefacts (§ 2.3, § 4.2)

Bibliography

Agile Manifesto (website) <http://agilemanifesto.org>  
 PMI — Project Management Institute (2013) *A Guide to the Project Management Body of Knowledge* (5th ed). Newtown Square, PA: PMI.  
 ISO — International Organization for Standardization (2012) *ISO 21500 — Guidance on Project Management*. Geneva: ISO.  
 OGC — Office of Government Commerce (2009) *Managing Successful Projects with PRINCE2™*. London: TSO.  
 Perdicoulis, A. (2018) *Project Management* (2nd ed.). Perdicoulis Publishing: Book Division, Praxis Primer Series.  
 Perdicoulis, A. (2017) *Ex ante project assessment*. *Systems Planner*, **40**.  
 Perdicoulis, A. (2015g) *Stakeholders*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2015f) Alternative views of the process. *Systems Planner*, **36**.  
 Perdicoulis, A. (2015e) Iterations in planning and management. *Systems Planner*, **34**.  
 Perdicoulis, A. (2015c) *Impacts*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2015b) *Communication*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2015a) *Risks*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2014j) *Methodology*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2014i) *Language*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2014h) *Assessment*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2014g) *Competences*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2014f) *Cause*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2014e) *Niche*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2014d) *Niche*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2014c) *Terminology*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2014b) *Operations*. Perdicoulis Publishing: Folio Division, Technical Collection.  
 Perdicoulis, A. (2014a) Project timeline. *Systems Planner*, **26**.  
 Perdicoulis, A. (2013b) Hierarchical breakdown structures. *Systems Planner*, **23**.  
 Perdicoulis, A. (2013a) Commented CPD examples. *Systems Planner*, **17**.  
 Perdicoulis, A. (2012) Roadmaps. *Systems Planner*, **12**.  
 Perdicoulis, A. (2011) *Building Competences for Spatial Planners: Methods and Techniques for Performing Tasks with Efficiency*. London: Routledge.  
 Perdicoulis, A. (2010) *Systems Thinking and Decision Making in Urban and Environmental Planning*. Cheltenham: Edward Elgar.  
 Perrine, R.E. (2010) *Communication deficiencies: a case study in project management*. Los Gatos, CA: Smashwords.  
 Schwaber, K., and J. Sutherland (2013) *The Scrum Guide™ — The Definitive Guide to Scrum: The Rules of the Game*. Scrum.org (<https://www.scrum.org>).