

A bird's eye view on the agile forest¹

Henny Portman

Some years ago, you could say “*Scrum is agile*” and ask “*is agile Scrum?*” Now we know there is much more flesh on the bones. At this moment there are more than fifty known and less known agile approaches, frameworks or methods available. To get a first impression of the different approaches, I try to bring some structure in the jungle to approaches, methods and frameworks. In Figure 1, I position the best-known agile approaches in a structure. The approaches, frameworks or methods are positioned within the 'One-time programs / projects' sections or within 'Business as usual' / indefinite, or both.

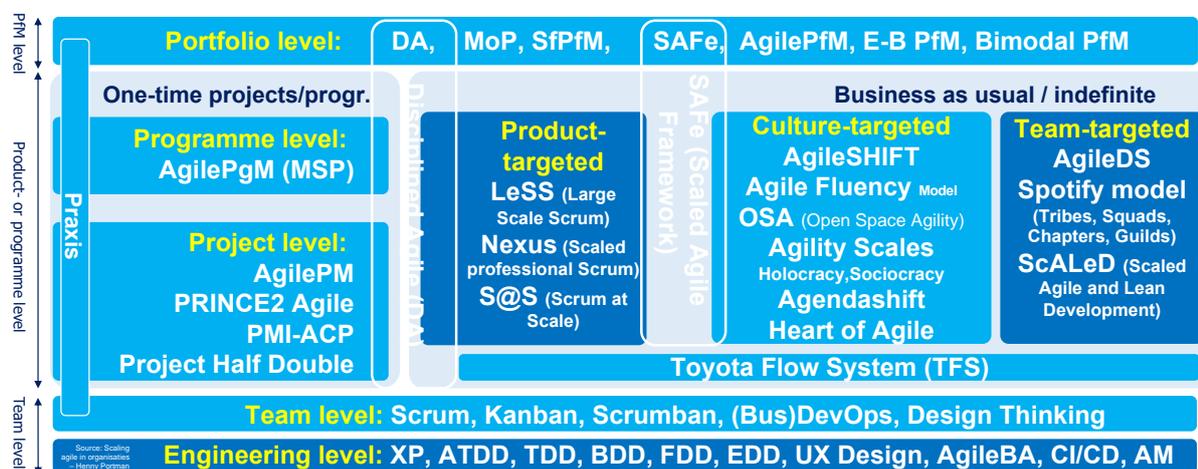


Fig. 1 Overview agile approaches, frameworks and methods²

On the other side the approaches, frameworks or methods are clustered around team, product or programme and portfolio level. In the dark blue boxes in Figure 1 we see agile approaches that are only applicable in IT-focused organizations. All other approaches can be used within IT and non-IT-oriented organizations (light blue coloured). I haven't mapped all the known approaches, frameworks and methods in this figure, and to be honest, I think there is a lot of duplication and probably commercial drivers play a role too to 'develop' the next kid on the block without added value in comparison with the existing approaches, frameworks or methods.

The team level, including Scrum and Kanban, is applicable in both IT-oriented and non-IT-oriented products and services development and operations. The engineering level focuses specifically on IT-oriented product development. The one-time, temporary projects and programme frameworks and methods are suitable for both IT and non-IT. The permanent umbrella frameworks (both product-targeted and team-targeted) focus specifically on IT and

¹ How to cite this paper: Portman, H. (2019). A bird's eye view on the agile forest; *PM World Journal*, Vol. VIII, Issue X, November.

² This picture is based on a simpler version in the book *Scaling Agile in organizations* by Henny Portman, Van Haren Publishing, 2017

product development and the Culture-targeted approaches help organisations to increase their agility.

Team level

If we start at the team level in Figure 1, then we see of course **Scrum**³ as described by Ken Schwaber and Jeff Sutherland in their Scrum Guide. In addition, you will see frameworks such as **Kanban**⁴ (as described in the Kanban Guide for Scrum Teams), Scrumban⁵ and DevOps⁶ or BusDevOps. The team level can be used both within the IT environment and the non-IT environment. At this team level we can position the following IT frameworks too: Crystal Development Framework⁷, Agile Unified Process (AUP)⁸ as a simplified version of Rational Unified Process (RUP)⁹ which was superseded by Disciplined Agile Development (DAD) which was superseded by Disciplined Agile (DA)¹⁰. If you want to deliver quality as a team within the IT world, only following these frameworks is not enough. To improve quality and minimize technical debt (e.g., inefficient code due to many iterative adjustments), you could make use of eXtreme Programming (XP)¹¹ with Pair Programming, Acceptance Test Driven Development (ATDD)¹², Test Driven Development (TDD)¹³, Behaviour Driven Development (BDD)¹⁴, Feature Driven Development (FDD)¹⁵, Example Driven development (EDD)¹⁶, User Experience (UX) Design¹⁷, Continuous Integration and Continuous Deployment (CI/CD)¹⁸. AgileBA¹⁹ delivers the techniques to perform business analysis.

Agile modeling (AM)²⁰ is a methodology for modeling and documenting software systems based on best practices. It is a collection of values and principles, that can be applied on an (agile) software development project. There are several core practices: documentation, document continuously, document late, executable specifications, single-source information, active stakeholder participation, architecture envisioning, inclusive tools, iteration modeling, just barely good enough (JBGE), look-ahead modeling, model storming, multiple models, prioritized requirements, requirements envisioning.

³ <https://www.scrumguides.org/index.html>

⁴ <https://www.scrum.org/resources/blog/understanding-kanban-guide-scrum-teams>

⁵ <https://leankit.com/learn/agile/what-is-scrumban/>

⁶ <https://devops.com>

⁷ <https://activecollab.com/blog/project-management/crystal-methods>

⁸ <http://www.ambysoft.com/unifiedprocess/agileUP.html>

⁹ <http://www.agilemodeling.com/essays/agileModelingRUP.htm>

¹⁰ <http://disciplinedagiledelivery.com>

¹¹ <http://www.extremeprogramming.org>

¹² <https://www.agilealliance.org>

¹³ <https://www.agilealliance.org>

¹⁴ <https://www.agilealliance.org>

¹⁵ <http://agilemodeling.com/essays/fdd.htm>

¹⁶ <https://medium.com/feenk/an-example-of-example-driven-development-4dea0d995920>

¹⁷ <https://careerfoundry.com/en/blog/ux-design/what-is-user-experience-ux-design-everything-you-need-to-know-to-get-started/>

¹⁸ <https://www.infoworld.com/article/3271126/what-is-cicd-continuous-integration-and-continuous-delivery-explained.html>

¹⁹ <https://www.agilebusiness.org/store/ListProducts.aspx?catid=&ftr=agileBA>

²⁰ <http://agilemodeling.com>

Scrum or Kanban?

When teams start working with Agile, Scrum is often chosen. An obvious choice, but the question is whether this is always the right choice. In a Roman Pichler²¹ blog the link was made with the life phase of a product. During the first phase of a commercial product lifecycle, in which the commercial product is finally put on the market for the first time, the uncertainty is high, and the focus is on on-time delivery of the first market-ready product. A deadline has been set and that date must be met. During this phase, the focus of the entire team is on delivering a commercially marketable product. This development is perfect for Scrum with its iterative approach, being able to deal with uncertainty and working together on the result (the commercial product). Optionally, a second launch can take place with a next set of important functionalities, so that eventually a mature product is put on the market. During the further course of the product lifecycle, we see the amount of uncertainty and requested changes decrease. At this moment you can make good use of Kanban. In a continuous flow, User Stories can be picked up, developed and deployed one by one by individual team members.

If one looks at the often difficult transfer to production environments, the time-to-market can be shortened by properly arranging the transfer and reducing the number of transfer errors when development and production teams are merged, and the integration testing and deployment are automated (Continuous Integration and Continuous Deployment CI/CD). In this way a **DevOps**²² team is created.

Scrumban²³ is the combination of Scrum and Kanban. In the first instance it was intended as a transitional model to switch from Scrum to Kanban and let the team experience Lean- and Kanban concepts. Nowadays it is an approach in which the team has chosen to work according to Scrum with Sprints, but to use the Kanban system to continually view and improve its working method to optimize the flow of units of work (e.g. User Stories). **Leanscrum**²⁴ is Scrum done under the context of Lean principles.

Scaling up towards product- or program level

In order to be able to use an agile way of working in an organization of some size, just having individual agile teams is not enough. The agile way of working needs to be scaled up and where possible the overarching alignment needs to be institutionalized.

To institutionalize coordination, management of dependencies and integration between the different permanent agile teams within 'the run-the-business' / 'business-as-usual' side there are various frameworks available, including:

²¹ Pichler, Roman, 'Is Scrum right for your product?', 19 september 2016, see: www.romanpichler.com

²² <https://devops.com>

²³ <https://en.wikipedia.org/wiki/Scrumban>

²⁴ <https://www.netobjectives.com/resources/lean-scrum>

- **Nexus²⁵**, as described in The Nexus Guide, is a framework for developing product or software development initiatives with three to nine Scrum Teams, in Sprints of up to thirty days. Nexus is the answer of Ken Schwaber, one of the founding fathers of Scrum, to the scalability of Scrum. It requires more than just the will and the agile behaviour of the different Scrum Teams to work together to deliver an integrated product. Nexus is based and builds on Scrum and the rules and roles formulated in The Scrum Guide. We can position Nexus over the team and program levels of SAFe, but it does not offer provisions on portfolio level.
- Scrum at Scale (**S@S²⁶**, developed by Jeff Sutherland and Alex Brown) is a modular framework. The starting point at S@S is that an all-encompassing one-size-fits-all framework is not possible, but that every time we have to look at scaling of the underlying Scrum principles. The framework can be tailored for your own organization by adding the needed S@S modules. S@S builds on the well-known Scrum framework. By analogy with Nexus you could therefore say that S@S is the answer from Jeff Sutherland, next to Ken Schwaber, the other founding father of Scrum, on the scalability of Scrum.
- Large-Scale Scrum (**LeSS²⁷**, developed by Craig Larman and Bas Vodde) is an agile framework with rules, based on principles and doing experiments. The LeSS Company offers a freely accessible knowledge base (less.works) containing the integrated approach, principles, process descriptions, definitions, roles, examples, et cetera, for large-scale, mainly IT-related, product development. Transparency is also a key concept within LeSS. The first version dates from 2005 and since then, work is constantly being done on the use and further development of LeSS.
- Scaled Agile Framework (**SAFe²⁸**, developed by Dean Leffingwell) is a framework to enable scaling up of agile teams in order to create better systems, create higher employee engagement and make use of correct cost considerations. This is the mission of the scaled agile organization and of the founder of SAFe, Dean Leffingwell. The scaled agile organization offers a knowledge base that is freely accessible to everyone (www.scaledagileframework.com) with an integrated approach in the form of process descriptions, definitions, roles, examples, etc. for Lean / Agile product development. SAFe is based on five core competences: Lean-Agile Leadership, Team and Technical Agility, DevOps and Release on Demands, Business Solutions and Lean Systems and Lean Portfolio management.

Figure 1 (see the 'Business as usual' / indefinite block), makes use of a division between product and team targets, namely on the basis of cooperation, if necessary, of teams or not. Or with other words, can the individual teams work autonomous (team focus) or do they have to work together to deliver a new or modified product (product focus). The fore mentioned frameworks all relate to examples where multiple teams work on a single complex product or value stream

²⁵ <https://www.scrum.org/resources/nexus-guide>

²⁶ <https://www.scrumatscale.com/scrums-at-scale-guide/>

²⁷ <https://less.works>

²⁸ <https://www.scaledagileframework.com>

(product targeted frameworks). Not visual in the figure several approaches make a distinction between products where you are working together in with a maximum of nine teams (in total the team of teams must not exceed the Dunbar number of 125-150 people) and a team of teams of teams (e.g. SAFe large solutions, Nexus+, LeSS Huge).

The other group concerns approaches to support IT departments that have to maintain dozens or hundreds of applications or services, whereby the dependencies between the teams are minimal (multiple team targeted frameworks). Here the **Spotify model**²⁹ (developed by Henrik Kniberg, Anders Ivarsson and Joakim Sundén) can be positioned, but also Scaled Agile Lean Development (**ScALeD**³⁰, developed by Peter Beck, Markus Gartner, Christoph Mathis, Stefan Roock and Andreas Schliep). For both groups, there are essential interfaces between the teams in areas such as data integrity, security and architecture that may not or sometimes will ask for coordination when implementing changes.

In addition, there are many, less known, frameworks that can offer support at the product level, including Agile Integration Framework (AIF), Agile Team Portfolio Management (AgileTPM), AgilePath, Continuous Agile³¹, Enterprise Scrum³², Enterprise Agility³³, FAST Agile³⁴, RAGE³⁵, Surge³⁶, XSCALE³⁷, Industrial XP³⁸, and AgileDS³⁹.

On the left side of figure 1 we see the one-time projects and programs as part of 'change the business'. Here a distinction is made between projects and programs. Within the project block we see three frameworks and/or methods, all three of which are a further development of the more traditional project management frameworks:

- Agile Project Management (**AgilePM**⁴⁰, which is derived from DSDM);
- **PRINCE2 Agile**⁴¹ (derived from PRINCE2 from AXELOS)
- **PMI-ACP**⁴² (in addition to the PMBoK Guide of PMI)
- **Project Half Double**⁴³ (Project Half Double is run by a community of dedicated project management practitioners who are passionate about what they do)
- Agile Project Management (APM), not mentioned in the figure, can be positioned here too.

²⁹ <https://blog.crisp.se/wp-content/uploads/2012/11/SpotifyScaling.pdf>

³⁰ <http://scaledprinciples.org>

³¹ <http://www.continuousagile.com/unblock/>

³² <http://www.enterprisescrum.com/what-is-enterprise-scrum/>

³³ <https://www.eliassen.com/agile/lunch-and-learn/Scaling-Agile-with-the-Enterprise-Agility-Model>

³⁴ <http://www.fast-agile.com/home>

³⁵ <https://www.cprime.com/rage/>

³⁶ <https://www.gearstream.com/surge/>

³⁷ <https://xscalealliance.org>

³⁸ <http://www.industrialxp.org>

³⁹ <https://apmg-businessbooks.com/books/project-programme-management/agile-ds-digital-services-beta-handbook>

⁴⁰ <https://www.agilebusiness.org>

⁴¹ <https://www.axelos.com/best-practice-solutions/prince2-agile/what-is-prince2-agile>

⁴² <https://www.pmi.org/certifications/types/agile-acp>

⁴³ <https://www.projecthalfdouble.dk/en/>

On the program side we see:

- Managing Successful Programs (**MSP**⁴⁴ from AXELOS) that is very agile in itself with the step-by-step growth (via tranches) towards the intended goal (and connects to PRINCE2 (Agile)) and
- **AgilePgM**⁴⁵ (Agile Program Management of Agile Business Consortium) that connects with AgilePM on the one hand and is comparable with MSP on the other hand.

Praxis⁴⁶ covered the portfolio, programme and team levels. Praxis is a free framework for the management of projects, programmes and portfolios (based on PRINCE2, MSP, MoP, AgilePM and other frameworks). It includes a body of knowledge, methodology, competency framework and capability maturity model. The framework is supported by a knowledgebase of resources and an encyclopaedia.

Disciplined Agile (DA)⁴⁷ covers both one-time projects and programs as well as business as usual product development. The DA toolkit is a process decision toolkit that describes how agile software development, DevOps, IT, and business teams work in enterprise-class settings.

The **Toyota Flow System (TFS)**⁴⁸, developed by Nigel Thurlow, Professor John Turner, Brian Rivera (2019) can be described as a system of patterns, practices and techniques to enable organizations and institutions to achieve desired outcomes in a complex world. This model uses the popular representation of a house, from the Toyota Production System model (TPS), to outline an evidence-based approach to achieving business transformation. The TFS is a system of understanding, and not a one-size-fits-all framework. The TFS model aims to sustain the flow of value to the customer, who is the center of the TFS universe. As we dig deeper into the helixes, we find the philosophies, tools and knowledge (practice and theory) behind each component. For Distributed Leadership, leadership is viewed as being bottom-up, top-down, as well as horizontal. Complexity Thinking involves identifying the level of complexity that is present in a problem or environment and calls for viewing systems as open and complex adaptive systems (CAS). Finally, Team Science utilizes empirical research to incorporate teamwork into current practices rather than operating as command-and-control groups with no teamwork present.

Portfolio management level

Traditional portfolio management focuses on 'change the business'. In the previous chapters it has become clear that more and more changes are being handled by the line organization, that is to say: by the permanent agile teams. This means that portfolio management must now also provide an overview of what takes place in 'run the business' / 'business as usual' for to be

⁴⁴ <https://www.axelos.com/best-practice-solutions/msp>

⁴⁵ <https://www.agilebusiness.org>

⁴⁶ <https://www.praxisframework.org>

⁴⁷ <http://disciplinedagiledelivery.com>

⁴⁸ <https://planet-lean.com/introducing-the-toyota-flow-system/>

implemented change initiatives. Existing portfolio frameworks such as Management of Portfolios (**MoP**⁴⁹ from AXELOS) and Standard for Portfolio Management (**SfPm**⁵⁰ from PMI) only cover the change-the-business part. Agile Portfolio Management (**AgilePm**⁵¹ from ABC) covers 'run the business' / 'business as usual' as well as 'change the business'.

Evidence-Based Portfolio Management (**E-B Pm**)⁵² is an approach that applies lean and agile principles to the challenge of deciding where to invest to derive the greatest business benefit. It enables organizations to quickly test ideas by actually building and validating the smallest solution that will deliver a single outcome to a single set of customers or users. Evidence-Based Portfolio Management takes a Principles Based Approach:

1. Separate capacity-for-growth from focus-of-work
2. Make the best decision you can, based on the best evidence available
3. Invest in improving business impacts using hypotheses, don't just fund activity
4. Continuously (re)evaluate and (re)order opportunities
5. Minimize avoidable loss
6. Let teams pull work as they have capacity
7. Improve status reporting with increased engagement and transparency.

In addition, there are a number of agile frameworks that also include a portfolio management component:

- **SAFe**⁵³ offers a portfolio management layer to control 'run the business' / 'business as usual' permanent team(s) of teams.
- Disciplined Agile (**DA**)⁵⁴ offers a portfolio process in which, in addition to projects, a number of 'run-the-business' / 'business-as-usual' aspects are taken into account, such as the permanent teams and the operational management of existing IT solutions.
- **Scrum @ Scale**⁵⁵ contains modules Strategic vision and Organizational development to which portfolio management can be related.
- Spotify also provides its own portfolio management approach with its strategic planning.
- **AgilePm**⁵⁶ use some basic concepts of an innovation hub, an agile portfolio process, maturity of the initiatives within the portfolio as well as horizons for an agile portfolio.

⁴⁹ <https://www.axelos.com/best-practice-solutions/mop>

⁵⁰ <https://www.pmi.org/pmbok-guide-standards/foundational/standard-for-portfolio-management>

⁵¹ <https://www.agilebusiness.org>

⁵² <https://www.scrum.org/resources/introduction-evidence-based-portfolio-management>

⁵³ <https://www.scaledagileframework.com>

⁵⁴ <http://disciplinedagiledelivery.com>

⁵⁵ <https://www.scrumatscale.com/scrums-at-scale-guide/>

⁵⁶ <https://www.agilebusiness.org>

At the moment (2019) there are no mature portfolio management frameworks that include 'change the business' as well as 'run the business' / 'business as usual'. AgilePfM was launched by the Agile Business Consortium (previously DSDM Consortium) as part of their Agile Business Change Framework. However, it is becoming increasingly clear that the overarching agile portfolio management principles are based on frameworks like SAFe, Agile PfM and Disciplined Agile. **Bimodal Portfolio Management (Bimodal PfM)**⁵⁷ by Henny Portman) is a framework where the best of the existing Portfolio management frameworks are combined and offer a solution for both worlds in the form of a Bimodal Portfolio Kanban, Bimodal Portfolio Management Principles and Bimodal Portfolio Roadmaps.

Enterprise level

The culture targeted box provides approaches to increase business agility by changing the mindset of all staff in the organisation. What does it mean to work in an agile way? How can we make sure that the Agile Manifesto values and principles are understood and applied, and the Scrum values (courage, focus, commitment, respect and openness) are part of what we are doing? If the right mindset is in place it makes it much easier to implement an agile approach. In figure 1 the following approaches are mentioned:

- **SAFe**⁵⁸ (as of version 5.0) offers two extra competencies: Continuous Learning Culture (CLC) and Organizational Agility (OA). Continuous Learning Culture is based on three dimensions: Learning Organization (shared vision, systems thinking, mental models, team learning, personal mastery), Relentless Improvement (constant sense of danger, optimize the whole, problem solving culture, reflect at key milestones, fact based improvement), and Innovation Culture (innovative people, time & space, go see, experimentation & feedback, pivot without mercy or guilt, innovation riptides). The three dimensions of Organizational Agility are: Lean-thinking people and agile teams (house of lean, SAFe principles, Agile Manifesto), Lean Business Operations (process time - delay time - process time) and Strategy Agility.
- Open Space Agility (**OSA**)⁵⁹ is a safe, pragmatic and repeatable technique for getting a rapid and lasting Agile adoption. It works with the approach you are currently using, and OSA can be added at any time. OSA is used to actively engage as many employees as possible in your Agile program.
- **AgileSHIFT**⁶⁰ (developed by AXELOS) is a framework that prepares people for transformational change by creating a culture of enterprise agility. The AgileSHIFT framework helps organizations to undergo a transformational change, to adopt a 'survive, compete and thrive' mindset. It will help to bridge the gap between the current and the target state (the Delta in AgileSHIFT) by embracing a range of agile, structured

⁵⁷ <https://hennyportman.wordpress.com/2019/06/26/bimodal-portfolio-management/>

⁵⁸ <https://www.scaledagileframework.com>

⁵⁹ <https://openspaceagility.com>

⁶⁰ <https://www.axelos.com/best-practice-solutions/agile-shift>

and hybrid approaches across the organization. The existing severe split between 'run the business' and 'change the business' will vanish.

- The **Agile Fluency model**⁶¹, developed by Diana Larsen and James Shore in 2012 and substantially updated in 2018, is a framework to help teams understand their current position and to help them develop an individual road map. Agile teams pass through four distinct zones of fluency as they learn (Focusing teams, Delivering teams, Optimizing teams and Strengthening teams). Diana Larsen defines fluency as things that you do automatically without thinking. Each zone brings specific benefits.
- **Agility scales**⁶² (developed by Jurgen Appelo) helps organizations achieve agility at scale from the bottom up – with measurable evidence of organizational transformation.
- **Holacracy**⁶³ (developed by Ternary founder Brian Robertson) is a method of decentralized management and organizational governance, in which authority and decision-making are distributed throughout a holarchy of self-organizing teams rather than being vested in a management hierarchy.
- **Sociocracy**⁶⁴ (Champion Gerard Endenburg), also known as dynamic governance, is a system of governance which seeks to achieve solutions that create harmonious social environments as well as productive organizations and businesses. It is distinguished by the use of consent rather than majority voting in decision-making, and decision-making after discussion by people who know each other.
- **Agendashift**⁶⁵ is a modern engagement model (developed by Mike Burrows) that is needs-based, outcome-oriented, continuous and open to help organizations grow wholeheartedness. Agendashift is based on five principles and covers five activities: Discovery, Exploration, Mapping, Elaborating, Operation.
- The **Heart of Agile**⁶⁶ is a radically simpler approach to achieve outstanding outcomes. The founder is Dr. Alistair Cockburn, one of the Agile Manifesto co-authors. The Heart of Agile simplifies two decades of practice into four critical imperatives that amplify your effectiveness: (Collaborate, Deliver, Reflect, Improve).

⁶¹ <https://martinfowler.com/articles/agileFluency.html>

⁶² <https://www.agilityscales.com>

⁶³ <https://en.wikipedia.org/wiki/Holacracy>

⁶⁴ <https://en.wikipedia.org/wiki/Sociocracy>

⁶⁵ <https://www.agendashift.com>

⁶⁶ <https://heartofagile.com>

Not mentioned in the figure:

- **Goal Driven Agile (GDA)**⁶⁷ rests on three main pillars: autonomy, alignment and structured improvement. It's a very simple framework and consists of only one base structure, the diamond, five roles and ten building blocks.
- **Lean Startup**⁶⁸ (developed by Eric Ries) is a methodology for developing businesses and products, which aims to shorten product development cycles and rapidly discover if a proposed business model is viable; this is achieved by adopting a combination of business-hypothesis-driven experimentation, by using a minimum viable product (MVP), iterative product releases, and validated learning.

Already more than 50 agile approaches, frameworks and methods and it's still growing. The figure can help you in your agile approach selection process, but it cannot be said often enough, do not act dogmatically, see an approach, framework or method not as a panacea that can be implemented out of the box. Common sense helps too to achieve more agility and probably the best route to become more agile is dividing your products and services into smaller autonomous parts and have them supported by an individual team.

⁶⁷ <https://pages.xebia.com/whitepaper-goal-driven-agile>

⁶⁸ <http://theleanstartup.com>

About the Author



Henny Portman

The Netherlands



Henny Portman, a partner of HWP Consulting, has 40 years of experience in the project management domain. He was the thought leader within NN Group of the PMO domain and responsible for the introduction and application of the PMO methodologies (portfolio, programme and project management) across Europe and Asia. He trains, coaches and directs (senior) programme, project and portfolio managers and project sponsors and built several professional (PM(O) communities. He is an accredited P3O, PRINCE2, MSP, MoP, PRINCE2 Agile, AgilePM, and AgileSHIFT trainer and a SPC4 SAFe consultant and trainer too. He is a P3M3 trainer and assessor and PMO Value Ring Certified Consultant. In addition, Henny is international speaker and author of many articles and books in the PM(O) field and blogger (hennyportman.wordpress.com). Henny can be contacted at henny.portman@hwpconsulting.nl .