



Scrum

A Brief History of a Long-Lived Hype

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- 97 Things Every Scrum Practitioner
Should Know
- Scrum - A Pocket Guide
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“I call myself a
Scrum
Caretaker.”



This publication was composed with utmost care by Gunther Verheyen, independent Scrum Caretaker for Ullizee-Inc. It is offered here for free and may be copied or used as you see fit. Credit to the author for the research is much appreciated.



The primary co-creators of Scrum, Ken Schwaber and Jeff Sutherland, released the first, official version of the Scrum Guide in 2010. More than offering exactness and detailed instructions, they envisioned reinstating the simplicity of the framework that Scrum is. Or should we say, the framework that Scrum *evolved* into since its first formal introduction in 1995? This publication describes how the definition and representation of Scrum have evolved over time and lists important landmarks in the history of Scrum. *Because a touch of historical awareness is more than helpful in understanding Scrum and caring for the future of Scrum.*

1. Evolutions of the Definition of Scrum (1995-2020)

The evolution of Scrum is illustrated through the changes and refinements in how Scrum is defined in various, established sources.

For every source the same three topics are described showing what Scrum consisted of at the time—the 'definition' of Scrum:

1. Roles, responsibilities, accountabilities
2. Controls, deliverables, artifacts
3. Phases, meetings, time-boxes, events

A graphical representation was either taken from the source directly, either from an alternative source of the same period.

Finally, my "Thoughts and observations" represent what I deem noticeable without further judgement.

1995 - "SCRUM Software Development Process"

Author(s): Ken Schwaber

At the OOPSLA¹ event of 1995, Ken Schwaber discussed Scrum in a "Business Object Design and Implementation" workshop with Jeff Sutherland as a panel member for that event track.

Scrum is defined as consisting of:

1. Project Team = Management + Development Teams
2. Backlog (> Release/Enhancements > Packets > Changes > Problems > Risks > Solutions > Issues)
3. Pregame (planning + design) + Game (Development Sprints) + Postgame (closure)

Scrum is represented as:

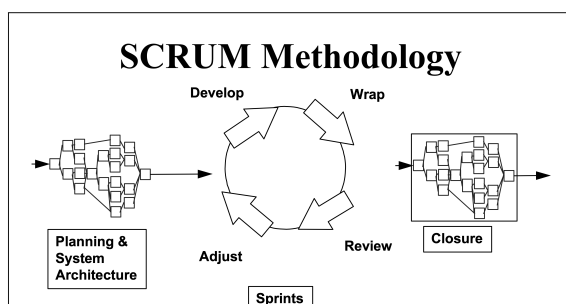


Exhibit 1: "SCRUM Methodology" (1995)

Thoughts and observations:

The paper isn't actually from 1995 but is based on the content codified/presented in 1995. Hence the references to sources of 1996. In "Agile Software Development with Scrum" (2002) Ken Schwaber mentions having presented Scrum at OOPSLA 96.

The capitalized representation "SCRUM" was later abandoned. It isn't (and never was) an acronym.

The "The New New Product Development Game" paper² of Takeuchi and Nonaka (1986) is referenced for the rugby analogy. Besides them, James Coplien is acknowledged for describing the success of a Scrum way of working (1994).

Scrum is described as a *methodology* that is fundamentally different from existing approaches:

- ♦ "Management" is led by the "Product Manager".
- ♦ "Development Teams" are small, cross-functional teams of between three and six people.
- ♦ The "Sprints" phase is an *empirical* process.
- ♦ The finality of the deliverable(s) of the "Sprints" phase is explicitly left open.

"Sprints are used to evolve the final product. [...] Iterative Sprints, until the product is deemed ready for distribution."

¹ Object-Oriented Programming, Systems, Languages & Applications

² Harvard Business Review, January-February 1986

1999 - "SCRUM: An extension pattern language for hyperproductive software development"

Author(s): Mike Beedle, Martine Devos, Yonat Sharon, Ken Schwaber and Jeff Sutherland

The authors elaborate three Scrum patterns:

- ♦ "Scrum Meeting": a daily meeting of 15 minutes (same time and place) for the team members.
- ♦ "Sprint": a period of approximately 30 days to create a visible and usable deliverable.
- ♦ "Backlog": a dynamic, prioritized list of the work to be performed on a product.

Some important concepts or ideas are introduced:

- ♦ "Scrum Master": a team leader role responsible for logging work, helping team members and resolving *blocks*.
- ♦ "Scrum Team": a self-organized team structure to produce a useful deliverable in a Sprint, undisturbed by outside requests.

- ♦ “Demo”: a session at the end of each Sprint to demonstrate new functionality and real progress (reduction of backlog). It is followed by a “review” session to change the planning for the future.

The paper has no list or summary but based on the descriptions I interpret the underlying definition of Scrum as:

1. Scrum Master + Scrum Team
2. Backlog
3. Sprint + Scrum Meetings + Demo/review

Thoughts and observations:

The Scrum patterns are presented as extensions to the organizational patterns of James Coplien³:

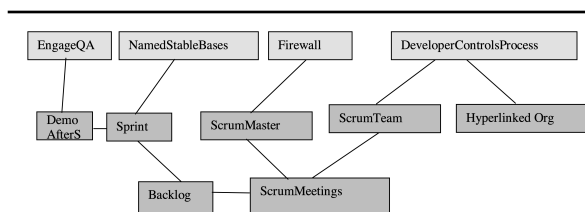


Figure 2. SCRUM Pattern Language Lattice

Exhibit 2: “SCRUM Pattern Language Lattice” (1998)

Following ideas are expressed throughout the descriptions of the Scrum patterns:

- ♦ The ‘global’ backlog is distinguished from backlog selected for a Sprint, which is decomposed into tasks.
- ♦ The team selects that (part of) backlog that the team believes it can complete within a Sprint iteration and *commits* to it.
- ♦ The selection of work should be cohesive in the sense that—once completed—the Sprint’s *objective* is reached.
- ♦ The visible and usable deliverable demonstrated in the Demo is called the *increment*.
- ♦ The *product manager* or *product marketing manager* is mentioned as “the one person deciding over the priorities of the backlog”.
- ♦ Three questions are to be answered at the Scrum Meeting: Completed? / Blocks? / Next? The overall purpose of a Scrum Meeting is clearly described as providing an *adaptive* mechanism, “the equivalent of a *thermometer* that samples the team’s temperature”.

Several of the concepts, even without using their final naming, were later acknowledged as “significant contributions” to shaping Scrum in its first five years.

“A method can only supply a framework for the real work and indicate the places where creativity is needed.”

³ “Pattern Languages of Program Design”, Addison-Wesley, 1995

2002 - “Agile Software Development with Scrum”

Author(s): Ken Schwaber and Mike Beedle

Two signatories of the Agile Manifesto (2001) wrote the first book ever about Scrum.

Scrum is defined as consisting of:

1. Scrum Master + Product Owner + Scrum Team
2. Product Backlog (> Release Backlog) + Sprint Backlog + Product Increment
3. Sprint Planning + Sprint + Daily Scrum + Sprint Review

Scrum is represented as:

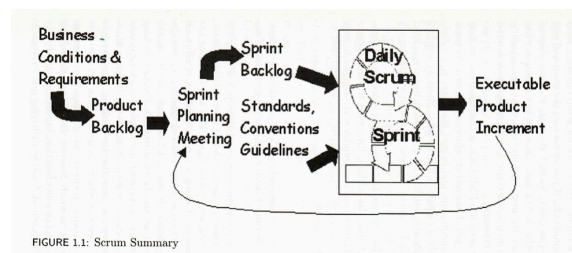


FIGURE 1.1: Scrum Summary

Exhibit 3: “Scrum Summary” (2002)

Thoughts and observations:

The “Pregame” and “Postgame” phases are removed. Scrum only defines Sprints.

Upon a description of *complexity*, Scrum is presented as advocating a new paradigm thriving on *empirical management* and *self-organization*.

The six characteristics of the “The New New Product Development Game” paper² of Takeuchi and Nonaka are referenced as fundamental to “the correct implementation of Scrum”.

The recommended team size is changed to seven people plus or minus two. On the topic of team composition it is stated that “Scrum eschews vertical Scrum Teams”.

Informal practices have now been formally named, while others are renamed:

- ♦ “Product Owner” is added as a role.
- ♦ *Blocks* are now called “Impediments”.
- ♦ “Scrum Meeting” is changed to “Daily Scrum”.
- ♦ A *Sprint’s objective* is now called the “Sprint Goal” while adding that Sprint Backlog must be defined to meet the Sprint Goal.
- ♦ “Demo/review” is changed to “Sprint Review”.

Abnormal termination of a Sprint is possible if it no longer makes sense to continue, although canceling a Sprint “rarely make sense”.

Scrum Master is described as a new management role introduced by Scrum.

“As a Scrum Master, I’m often tempted to help a team resolve its internal problems. Experience has taught me not to. [...] the game is in the team’s hands.”

2004 - "Agile Project Management with Scrum"

Author(s): Ken Schwaber

After establishing the ScrumAlliance and the "Certified ScrumMaster" course, Ken Schwaber publishes a second book about Scrum.

Scrum is defined as consisting of:

1. Product Owner + Team + ScrumMaster
2. Product Backlog (< vision) + Sprint Backlog + Increment (of Product Functionality)
3. Sprint Planning + Sprint + Daily Scrum + Sprint Review + Sprint Retrospective

Apart from the changes to the definition of Scrum, this second book contains many case studies.

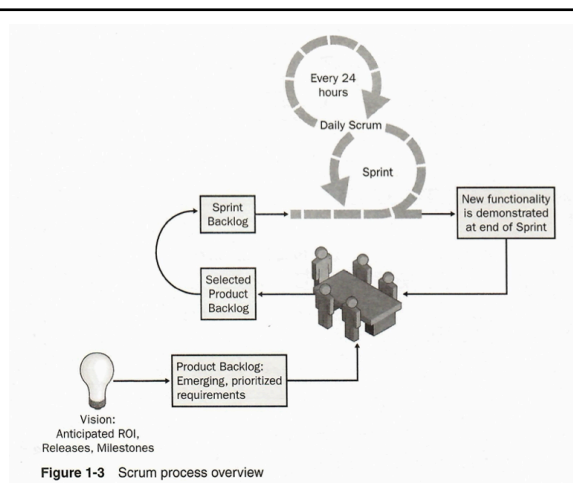


Exhibit 4: "Scrum process overview" (2004)

Scrum is represented as:

Thoughts and observations:

- ♦ The three legs of *empirical* process control (the alternative to *defined* process control) are called "visibility," "inspection" and "adaptation".
- ♦ A *vision*, for which Product Backlog is devised, is presented as the start of the "Scrum Flow".
- ♦ The term "artifacts" is introduced.
- ♦ Sprint Planning is formalized while "Sprint Retrospective" is added as time-boxed meeting.
- ♦ Sprint Planning has two parts, with part one focusing on Product Backlog (*What*) and part two on Sprint Backlog (*How*).
- ♦ Commitment over a Sprint is rephrased to the Team committing "that it will do its best".

The term "ScrumMaster" is explained as intended to highlight the extent to which it is different from a traditional (project) manager. The authority of a ScrumMaster is described as "largely indirect".

"In fact, I often compare a ScrumMaster to a sheepdog, responsible for keeping the flock together and the wolves away."

2007 - "The Enterprise and Scrum"

Author(s): Ken Schwaber

The third book by Ken Schwaber aspires describing why and how to adopt Scrum, what the challenges are and what the expected impact is.

In the appendix, Scrum is defined as it was:

1. Product Owner + Team + ScrumMaster
2. Product Backlog (< vision) + Sprint Backlog + Increment (of Product Functionality)
3. Sprint Planning + Sprint + Daily Scrum + Sprint Review + Sprint Retrospective

Scrum is represented as:

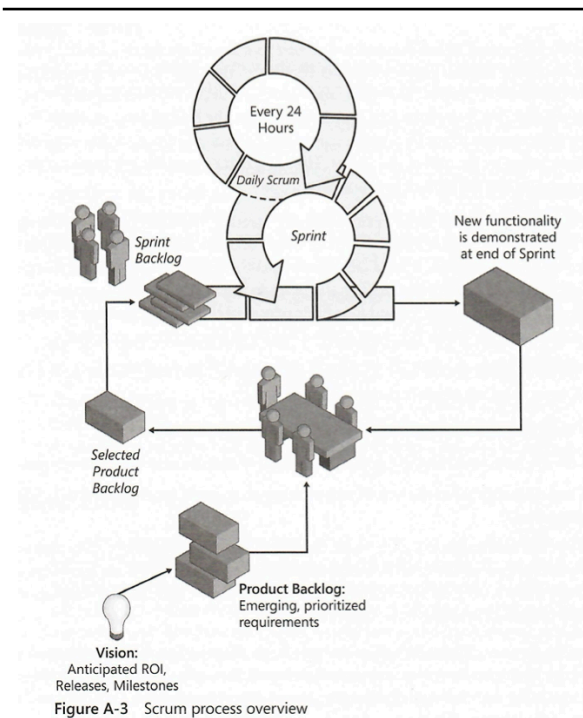


Exhibit 5: "Scrum process overview" (2007)

Thoughts and observations:

- ♦ "Development velocity" is described as a measure of the ability to turn requirements into shippable functionality across time.

2009, 2010 - "The Scrum Guide"

Author(s): Ken Schwaber and Jeff Sutherland

In May 2009, while still at the ScrumAlliance, Ken Schwaber creates a document that is called "ScrumGuide," a preliminary version of what will become "The Scrum Guide".

The first, official version is published in February 2010 with Jeff Sutherland as co-author. In the meantime, Ken Schwaber has founded Scrum.org.

The structure and the content of both documents are largely identical. However, the 2010 version does add that Scrum Master is a "servant-leader".

Scrum is defined as consisting of:

1. Scrum Team = ScrumMaster + Product Owner + Team
2. Release Planning + Sprint Planning + Sprint + Daily Scrum + Sprint Review + Sprint Retrospective
3. Product Backlog + Release Burndown + Sprint Backlog + Sprint Burndown

Thoughts and observations:

- ♦ The first leg of empiricism is renamed to "Transparency".
- ♦ "Release Planning" is mentioned as one of the Scrum "Time-boxes".
- ♦ Only the Product Owner has the authority to cancel a Sprint.
- ♦ Although "Increment" is not yet defined as an artifact, the purpose of Sprints is still explained as "to turn Product Backlog into increments of potentially shippable functionality". Increments must adhere to a *working definition of "done"*.

"Everyone will like Scrum; it is what we already do when our back is against the wall."

(Jeff Sutherland quoting James Coplien)

2011, 2013, 2016, 2017 - "The Scrum Guide"

Author(s): Ken Schwaber and Jeff Sutherland

In all of these updates of the Scrum Guide, Scrum is always defined as consisting of:

1. Scrum Team = Product Owner + Development Team + Scrum Master
2. Sprint + Sprint Planning + Daily Scrum + Sprint Review + Sprint Retrospective
3. Product Backlog + Sprint Backlog + Increment

The Scrum Guide never had any visual of Scrum. Following representation is from the book "Software in 30 Days" by the same authors (2012):

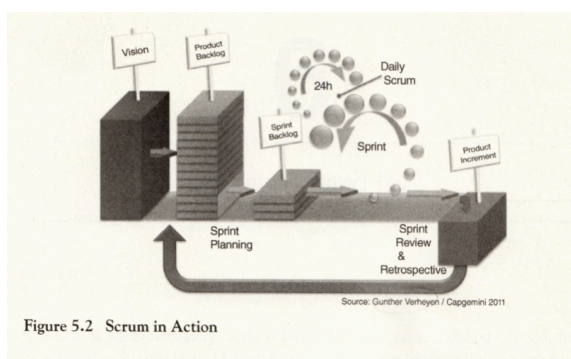


Exhibit 6: "Scrum in Action" (2012)

Note. Ken Schwaber asked and received my permission to use my picture of Scrum in the book.

Thoughts and observations:

Although the core definition of Scrum remained stable, following was changed in the different versions of the Scrum Guide:

- ♦ "Team" is renamed to "Development Team" with a recommended size of three to nine people. (2011)
- ♦ "Increment" becomes the third artifact (2011) and "a step toward a vision or goal" (2016).
- ♦ "Shippable" is renamed to "Releasable". (2011)
- ♦ Committing to a Sprint is replaced with making a *forecast* for a Sprint. (2011)
- ♦ "Release Planning" is eliminated as a mandatory meeting. (2011)
- ♦ Burndown charts are removed as a mandatory practice. (2011)
- ♦ The metaphor of pigs and chickens to illustrate commitment and responsibility is abandoned. (2011)
- ♦ Product Backlog must be "ordered" instead of "prioritized". (2011)
- ♦ "Product Backlog Grooming" is added as a practice (2011) and is renamed to "Product Backlog Refinement" (2013).
- ♦ Sprint Planning is one event with *What* and *How* as two topics to be discussed rather than making out two separate parts of the event. (2013)
- ♦ The three questions of the Daily Scrum are reformulated to emphasize *team* over *individual* (2013) and are made an optional instead of a mandatory practice (2017).
- ♦ The Scrum Values are added. (2016)

"When the values of commitment, courage, focus, openness and respect are embodied and lived by the Scrum Team, the Scrum pillars of transparency, inspection, and adaptation come to life and build trust for everyone."

2020 - "The Scrum Guide"

Author(s): Ken Schwaber and Jeff Sutherland

The 2020 version is the latest available version of the Scrum Guide at the time of the publication of "Scrum - A Brief History of a Long-Lived Hype".

Scrum is defined as consisting of:

1. Scrum Team = Product Owner + Developers + Scrum Master
2. Sprint + Sprint Planning + Daily Scrum + Sprint Review + Sprint Retrospective
3. Product Backlog (< Product Goal) + Sprint Backlog (< Sprint Goal) + Increment (=Done)

Although the Scrum Guide still has no visual of Scrum, the only change that impacts my previous picture is the explicit confirmation that a Sprint can deliver multiple Increments, thus more than just an Increment at the end of a Sprint.

I have used the updated version of my picture that will be included in the upcoming, third edition of my book "Scrum - A Pocket Guide" (forecasted to be available early 2021):

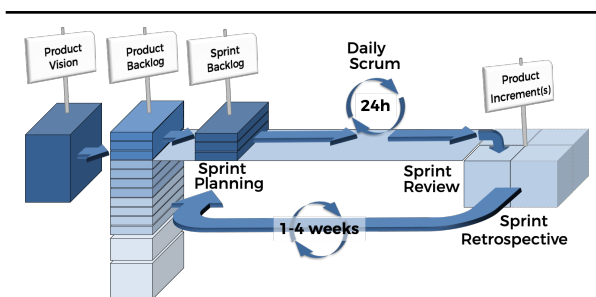


Figure 2.6 Overview of a Scrum Sprint

Exhibit 7: "Overview of a Scrum Sprint" (2021)

Thoughts and observations:

- ♦ "Development Team" is replaced with "Developers".
- ♦ The Scrum Team is said to be accountable for creating an Increment and its size is "typically 10 or fewer people".
- ♦ The three questions are completely removed.
- ♦ Product Goal is introduced as a mandatory part of Product Backlog to be the *commitment* for the Product Backlog.
- ♦ Sprint Goal is instructed to be a mandatory part of Sprint Backlog to be the *commitment* for the Sprint Backlog.
- ♦ The Definition of Done is the *commitment* for the Increment.
- ♦ The topic of *Why* is added to the topics of *What* and *How* to be discussed at Sprint Planning.
- ♦ "Role" is replaced with "accountability".
- ♦ "Self-organization" is replaced with "self-management".

"Scrum is free and offered in the Scrum Guide. The Scrum framework, as outlined therein, is immutable. While implementing only parts of Scrum is possible, the result is not Scrum. Scrum exists only in its entirety and functions well as a container for other techniques, methodologies, and practices."

2. Landmarks Along the Road

Following are some important landmarks in the history of Scrum:

- ♦ [PAPER] 1986: "The New New Product Development Game" (Hirotaka Takeuchi and Ikujiro Nonaka)
- ♦ [BOOK] 1990: "Wicked Problems, Righteous Solutions" (Peter DeGrace, Leslie Hulet Stahl)
- ♦ [PAPER] 1994: "Borland Software Craftsmanship: A New Look at Process, Quality and Productivity" (James Coplien)
- ♦ [CASE] 1994: Scrum at the Easel Corporation (Jeff Sutherland, John Scumniotales and Jeff McKenna)
- ♦ [PAPER] 1995: "SCRUM development process" (Ken Schwaber)
- ♦ [CASE] 1996: The C3 project and the birth of eXtreme Programming (Kent Beck)
- ♦ [PAPER] 1999: "SCRUM: An extension pattern language for hyperproductive software development" (Mike Beedle, Martine Devos, Yonat Sharon, Ken Schwaber and Jeff Sutherland)
- ♦ [BOOK] 1999: "eXtreme Programming eXplained" (Kent Beck)
- ♦ [WEB] 2001: "Manifesto for Agile Software Development", aka the Agile Manifesto
- ♦ [ORG] 2001: Agile Alliance (Ken Schwaber and others)
- ♦ [BOOK] 2002: "Agile Software Development with Scrum" (Ken Schwaber and Mike Beedle)
- ♦ [ORG] 2002: ScrumAlliance (Ken Schwaber, Mike Cohn and Esther Derby)
- ♦ [ORG] 2006: Scrum.inc (Jeff Sutherland)
- ♦ [ORG] 2009: Scrum.org (Ken Schwaber and Alex Armstrong)
- ♦ [PAPER] 2010: "The Scrum Guide" (Ken Schwaber and Jeff Sutherland) (updated 2011, 2013, 2016, 2017, 2020)

Regarding the inclusion of XP landmarks

I have consciously added some eXtreme Programming (XP) events as landmarks. The reason goes beyond the importance of Kent Beck etc. for the Agile movement. XP was the reason why Ken Schwaber and Jeff Sutherland didn't include specific development practices in the definition of Scrum. They assumed that practitioners would naturally discover and experience how Scrum and XP are a magnificent match. (I can testify from experience that this indeed is the case) Unfortunately, while the general interest in Scrum increased, that in XP decreased. It does not change the fact that a Scrum Team must have an agreed set of work practices and standards in place, to assure alignment and consistency of the collaborative work.

Scrum and the Desire for Universal Truths

The co-creators of Scrum, Jeff Sutherland and Ken Schwaber, created the Scrum Guide for good reasons. Though it might not be what many are looking for. The guide was not created to offer the universal truths that many are looking for.

Many look for universal precision, methodological exactness and razor-sharp instructions in Scrum's definition. But Scrum is used by countless individuals, teams and organizations across the world in unique environments and specific situations. No document or book, no matter its length, can correctly provide detailed instructions for all Scrum practitioners in all workplaces around the world. The definition of Scrum intentionally includes no such detailed instructions or hyper-specific tactics that in the end only work in specific circumstances.

We define how Scrum works, the rules and roles that apply, the behaviors that make it more effective. Scrum defines only minimal boundaries. Within them *people* can most effectively deal with the complexity of their challenges and create valuable solutions. People are invited to conceive an approach specific to their context. Scrum is a *framework*, not a traditional methodology.

It requires ability and courage to understand and build on the language and words provided by the Scrum Guide and focus on their intent and purpose.

About the author



Gunther Verheyen calls himself an *independent Scrum Caretaker* on a journey of humanizing the workplace with Scrum. He has been employing Scrum since 2003, has published two books about Scrum and was a partner of Ken Schwaber, co-creator of Scrum.

Gunther ventured into IT and software development after graduating as an Industrial Engineer in electronics in 1992. His Agile adventures started with eXtreme Programming and Scrum in 2003. Seven years of dedication followed; years that he spent on employing Scrum in diverse circumstances with various teams. In 2010 Gunther became the inspiring force behind some large-scale enterprise transformations. In 2011 he became a Professional Scrum Trainer for Scrum.org.

Gunther left consulting in 2013 to found Ullizee-Inc and partner exclusively with Ken Schwaber, Scrum co-creator. He represented Ken and the Scrum.org organization in Europe, managed the 'Professional Scrum' series and shepherded Scrum.org's global network of Professional Scrum Trainers. Gunther co-created Agility Path, EBM (Evidence-Based Management) and the Nexus framework for Scaled Professional Scrum.

In 2016 Gunther continued his journey to humanize the workplace as an independent Scrum Caretaker—a connector, teacher, writer, speaker. Gunther aspires helping organizations to re-imagine their Scrum to create a more humane and thereby more productive environment.

Gunther is the author of the acclaimed book "Scrum - A Pocket Guide" (2013), which was recommended by Ken Schwaber as "the best description of Scrum currently available". A second edition was published in 2019 and a third edition is planned for 2021. Gunther is the editor of the book "97 Things Every Scrum Practitioner Should Know" (2020) holding essays from field experts across the world.

When not traveling for Scrum and humanizing the workplace, Gunther lives and works in Antwerp (Belgium).

More at <https://guntherverheyen.com/about/>.