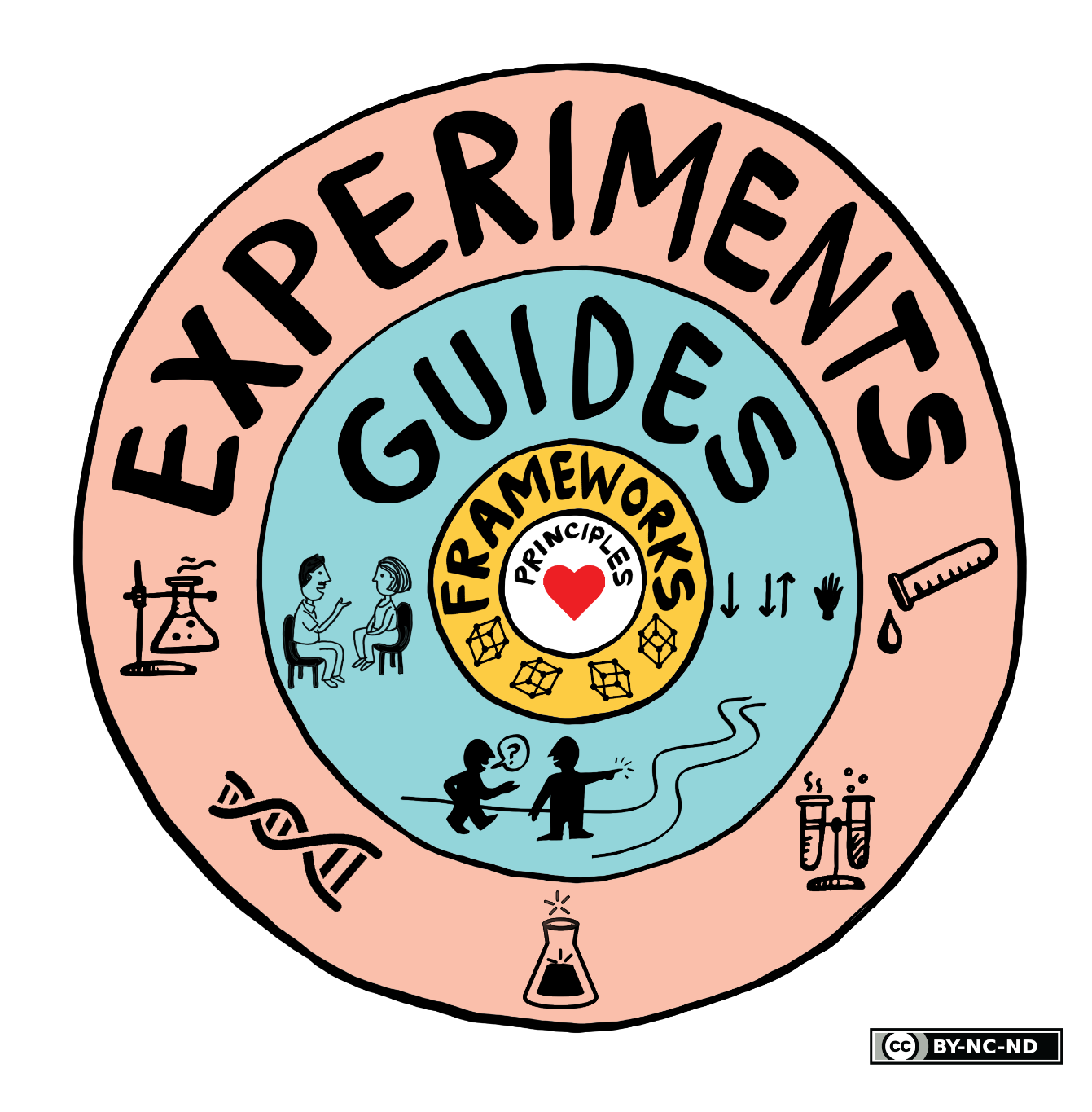
# Large Scale Scrum (LeSS)

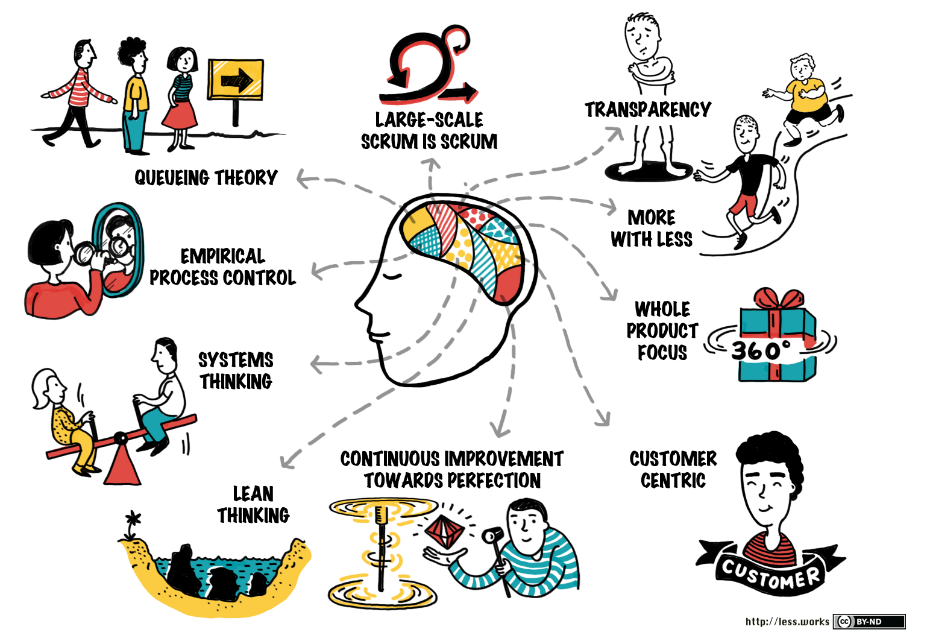


## LeSS as a framework

LeSS is more than a set of principles and experiments. It also provides a framework with rules. The LeSS Rules define what is LeSS (and what isn’t) and they provide a concrete framework for applying LeSS. Within the LeSS Framework, product groups can apply the experiments and discover what works best for them at a certain moment.

**There are no such things as best practices. There are only practices that are good within a certain context.**

# LeSS Principles

**Large-Scale Scrum is Scrum**—It is not “new and improved Scrum.” LeSS is about applying the principles, elements, and purpose of Scrum in a large-scale context. Multiple-team Scrum, not multiple Scrum teams.

**Empirical process control**—Inspection and adaptation of the product, processes, organizational design, and practices to craft a situational appropriate organization based on Scrum, rather than following a detailed formula. And empirical process control requires and creates transparency.

**Transparency**—Based on tangible ‘done’ items, short cycles, working together, common definitions, and driving out fear in the workplace.

**More with less**—(1) In empirical process control: more learning with less defined processes. (2) In lean thinking: more value with less waste and overhead. (3) In scaling, more ownership, purpose, and joy with less roles, artifacts, and special groups.

**Whole-product focus**—One Product Backlog, one Product Owner, one potentially shippable product increment, one Sprint—regardless if there are 3 or 33 teams. Customers want the product, not a part.

**Customer-centric**—Identify value and waste in the eyes of the paying customer. Reduce the cycle time from their perspective. Increase feedback loops with real customers. Everyone understands how their work today directly relates to paying customers.

**Continuous improvement towards perfection**—Create and deliver a product all the time, without defects, that utterly delights customers, improves the environment, and makes lives better. Do humble and radical improvement experiments each Sprint towards that.

**Systems thinking**—See, understand, and optimize the whole system (not parts), and explore system dynamics. Avoid the local and sub-optimizations of focusing on the ‘efficiency’ or ‘productivity’ of individuals and individual teams. Customers care about the overall concept-to-cash cycle time and flow, not individual steps.

**Lean thinking**—Create an organizational system whose foundation is managers-as-teachers who apply and teach systems thinking and lean thinking, manage to improve, and who practice **Go See** at **gemba**. Add the two pillars of respect for people and continuous improvement. All towards the goal of **perfection**.

**Queuing theory**—Understand how systems with queues behave in the R&D domain, and apply those insights to managing queue sizes, work-in-progress limits, multitasking, work packages, and variability.

# LeSS Rules (April 2018)

## LeSS Framework Rules

The LeSS framework applies to products with 2-“8” teams.

### LeSS Structure

* Structure the organization using real teams as the basic organizational building block.
* Each team is (1) self-managing, (2) cross-functional, (3) co-located, and (4) long-lived.
* The majority of the teams are customer-focused feature teams.
* Scrum Masters are responsible for a well-working LeSS adoption. Their focus is towards the Teams, Product Owner, organization, and development practices. A Scrum Master does not focus on just one team but on the overall organizational system.
* A Scrum Master is a dedicated full-time role.
* One Scrum Master can serve 1-3 teams.
* In LeSS, managers are optional, but if managers do exist their role is likely to change. Their focus shifts from managing the day-to-day product work to improving the value-delivering capability of the product development system.
* Managers’ role is to improve the product development system by practicing [Go See](http://less.works/less/principles/continuous-improvement-towards-perfection.html#GoSee), encouraging Stop & Fix, and “experiments over conformance”.
* For the product group, establish the complete LeSS structure “at the start”; this is vital for a LeSS adoption.
* For the larger organization beyond the product group, adopt LeSS evolutionarily using Go and See to create an organization where experimentation and improvement is the norm.

### LeSS Product

* There is one Product Owner and one Product Backlog for the complete shippable product.
* The Product Owner shouldn’t work alone on Product Backlog refinement; he is supported by the multiple Teams working directly with customers/users and other stakeholders.
* All prioritization goes through the Product Owner, but clarification is as much as possible directly between the Teams and customer/users and other stakeholders.
* The definition of product should be as broad and end-user/customer centric as is practical. Over time, the definition of product might expand. Broader definitions are preferred.
* One Definition of Done for the whole product common for all teams.
* Each team can have their own stronger Definition of Done by expanding the common one.
* The perfection goal is to improve the Definition of Done so that it results in a shippable product each Sprint (or even more frequently).

### LeSS Sprint

* There is one product-level Sprint, not a different Sprint for each Team. Each Team starts and ends the Sprint at the same time. Each Sprint results in an integrated whole product.
* Sprint Planning consists of two parts: Sprint Planning One is common for all teams while Sprint Planning Two is usually done separately for each team. Do multi-team Sprint Planning Two in a shared space for closely related items.
* Sprint Planning One is attended by the Product Owner and Teams or Team representatives. They together tentatively select the items that each team will work on that Sprint. The Teams identify opportunities to work together and final questions are clarified.
* Each Team has their own Sprint Backlog.
* Sprint Planning Two is for Teams to decide how they will do the selected items. This usually involves design and the creation of their Sprint Backlogs.
* Each Team has their own Daily Scrum.
* Cross-team coordination is decided by the teams. Prefer decentralized and informal coordination over centralized coordination. Emphasize Just Talk and informal networks via communicate in code, cross-team meetings, component mentors, travelers, scouts, and open spaces.
* Product Backlog Refinement (PBR) is preferably done with multiple teams to increase shared learning and to exploit coordination opportunities.
* There is one product Sprint Review; it is common for all teams. Ensure that suitable stakeholders join to contribute the information needed for effective inspection and adaptation.
* Each Team has their own Sprint Retrospective.
* An Overall Retrospective is held after the Team Retrospectives to discuss cross-team and system-wide issues, and create improvement experiments. This is attended by Product Owner, Scrum Masters, Team representatives, and managers (if any).

## LeSS Huge Framework Rules

LeSS Huge applies to products with “8+” teams. Avoid applying LeSS Huge for smaller product groups as it will result in more overhead and local optimizations.

All LeSS rules apply to LeSS Huge, unless otherwise stated. Each Requirement Area acts like the basic LeSS framework.

### LeSS Huge Structure

* Customer requirements that are strongly related from a customer perspective are grouped in Requirement Areas.
* Each Team specializes in one Requirement Area. Teams stay in one area for a long time. When there is more value in other areas, teams might change Requirement Area
* Each Requirement Area has one Area Product Owner.
* Each Requirement Area has between “4-8” teams. Avoid violating this range.
* LeSS Huge adoptions, including the structural changes, are done with an evolutionary incremental approach.
* Remember each day: LeSS Huge adoptions take months or years, infinite patience, and sense of humor.

### LeSS Huge Product

* One (overall) Product Owner is responsible for product-wide prioritization and deciding which teams work in which Area. He works closely with Area Product Owners.
* Area Product Owners act as Product Owners towards their teams.
* There is one Product Backlog; every item in it belongs to exactly one Requirement Area.
* There is one Area Product Backlog per Requirement Area. This backlog is conceptually a more granular view onto the one Product Backlog.

### LeSS Huge Sprint

* There is one product-level Sprint, not a different Sprint for each Requirement Area. It ends in one integrated whole product.
* The Product Owner and Area Product Owners synchronize frequently. Before Sprint Planning they ensure the Teams work on the most valuable items. After the Sprint Review, they further enable product-level adaptations.

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* Try… Technical leaders teach at workshops 299
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* Try… UI designers in regular (feature) teams 300
* Avoid… UI designers in a separate UI design group 300
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* Avoid… Architecture astronauts (PowerPoint architects) 302
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* Try… Component mailing lists 314
* Try… Internal open source with teachers—for tools too 315
* Try… Configurable design for customization 315
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* Avoid… Create ‘designs’ and then send them for offshore implementation 316
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* Try… Promote a shared pattern vocabulary 316
* Try… Test on the old hardware as soon as possible 317
* Try… HTML-ize and hyperlink your entire source code, daily 317
* Try… Lots of stubs, plus dependency injection 318
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* Try… Test-driven development for a better architecture 319
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* Try… Start with some weakly-typed interfaces, then strengthen 324
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* Avoid… Hiring many weak developers 339
* Avoid… Believing universities teach development skills 340
* Try… Increase organizational support for learning development skills 340
* Try… Support more self-study 341
* Avoid… Trivializing programming 341
* Try… Raise awareness of the negative impact of legacy code 342
* Avoid… Rewriting legacy code 343
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* Avoid… Large batches of changes 355
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* Avoid… Branching 358
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* Try… A mix between feature and component CI systems 365
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* Try… Visual management with CI 367
* Try… Add red-green screens to your CI system 368
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* Avoid… Agile/lean adoption targets or rewards 385
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* Avoid… Try… Individual team-level Sprint Review 406
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