



Getting To The Bottom Of It

5

WHYS

Getting To The Bottom Of It

The 5 WHYs: Getting to a Root Cause

What Is Your Key Problem?

Briefly, describe/define a single, most important problem or key challenges you are facing.

WHY is it happening?

Because:

1st WHY

Why?

Because:

2nd WHY

Why?

Because:

3rd WHY

Why?

Because:

4th WHY

Why?

Because:

5th WHY

5 WHYs is a simple, yet very effective discovery tool, that helps you get to the bottom of your problem, while moving through your discovery journey, in a linear direction.

However, even when you think you have discovered a root cause of your problem ("yes" decision), and think you can interfere and solve it at *that level*, you may want to continue discovering further and deeper (systemically), where the effect of your interference could be more impactful and powerful.

Note:

Therefore, a great continuation of the 5 WHYs discovery approach, could be **System Thinking/Modelling** (e.g. Causal Loop Diagrams, a.k.a. CLD), by which you can further understand the *system*, by exploring it in various, non-linear directions.

Getting To The Bottom Of It

The 5 WHYS: Getting to a Root Cause

What Is Your Key Problem?

I have hard time falling asleep at night
Briefly, describe/define a single, most important problem or key challenges you are facing.

WHY is it happening?

Because:

I eat a lot before bed
1st WHY

Why?

Because:

I am very hungry at night
2nd WHY

Why?

Because:

I have not eaten the whole day
3rd WHY

Why?

Because:

I had no lunch break at work
4th WHY

Why?

Because:

I came in late and got swamped
5th WHY

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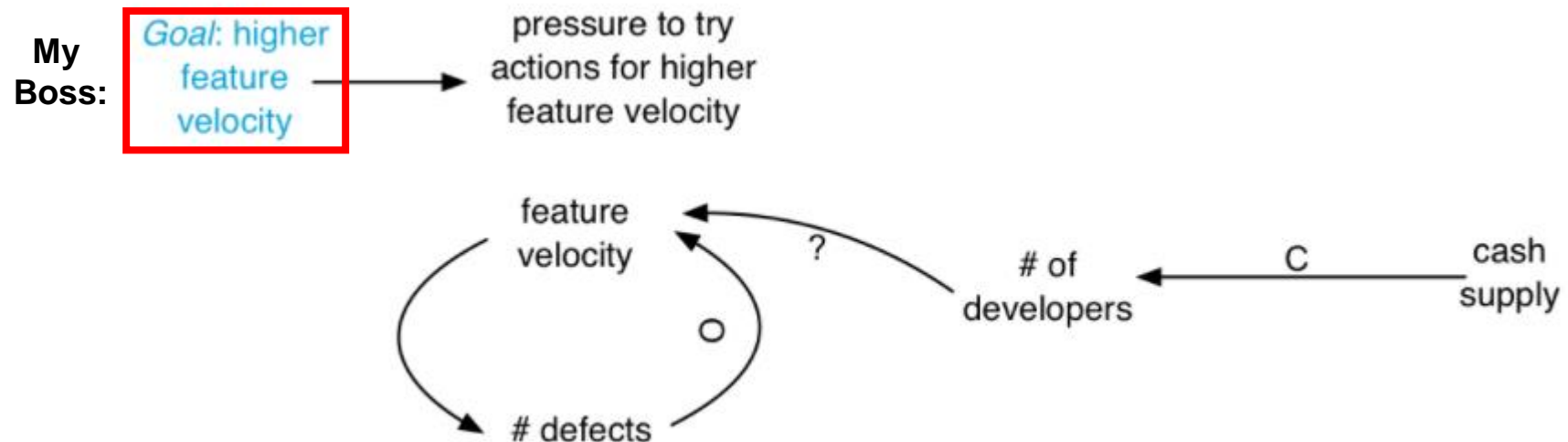
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Seeing, Thinking & Modelling The System

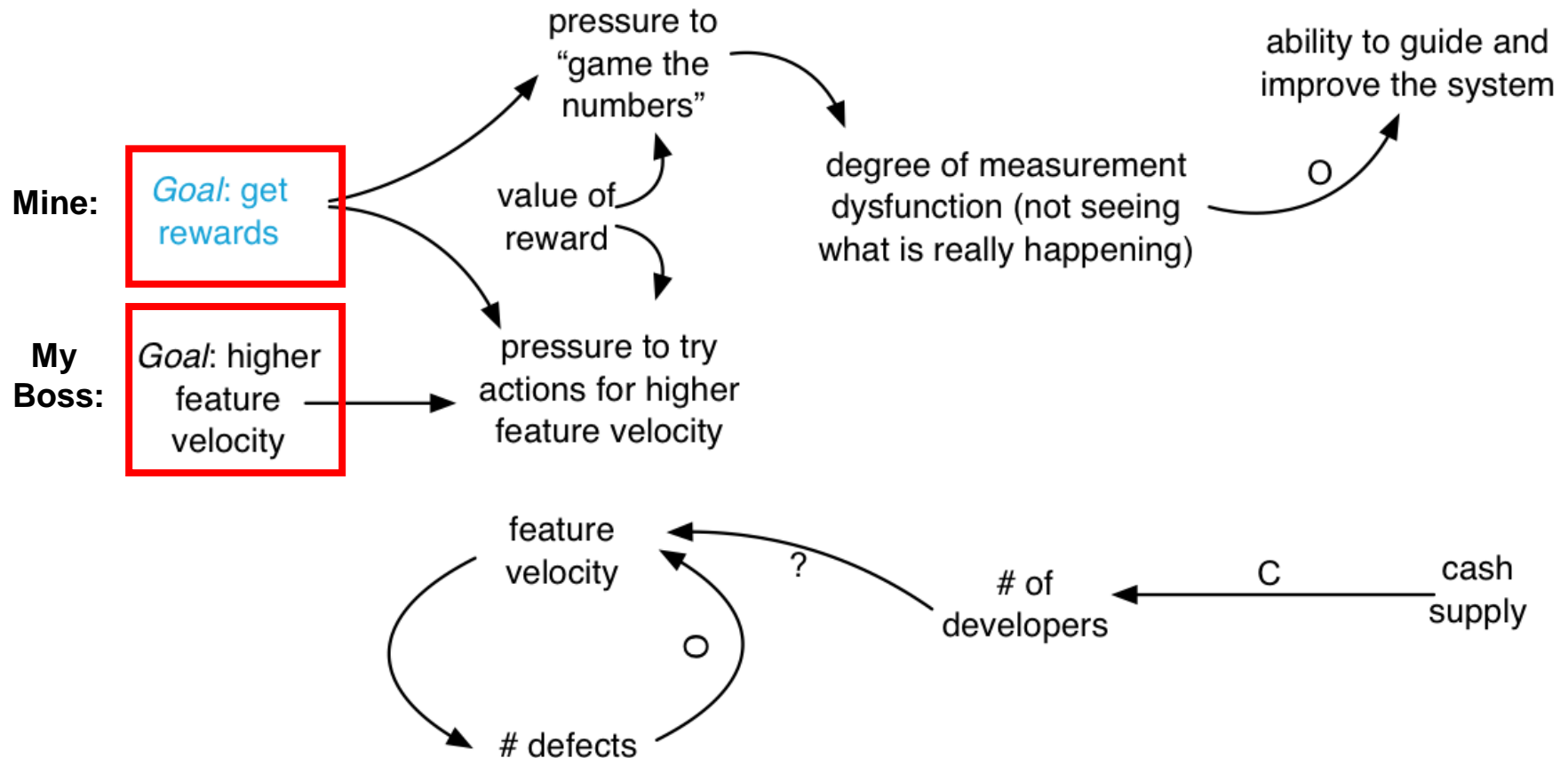
Causation
VS
Correlation

Seeing, Thinking & Modelling The System



<https://less.works/less/principles/systems-thinking>

Seeing, Thinking & Modelling The System

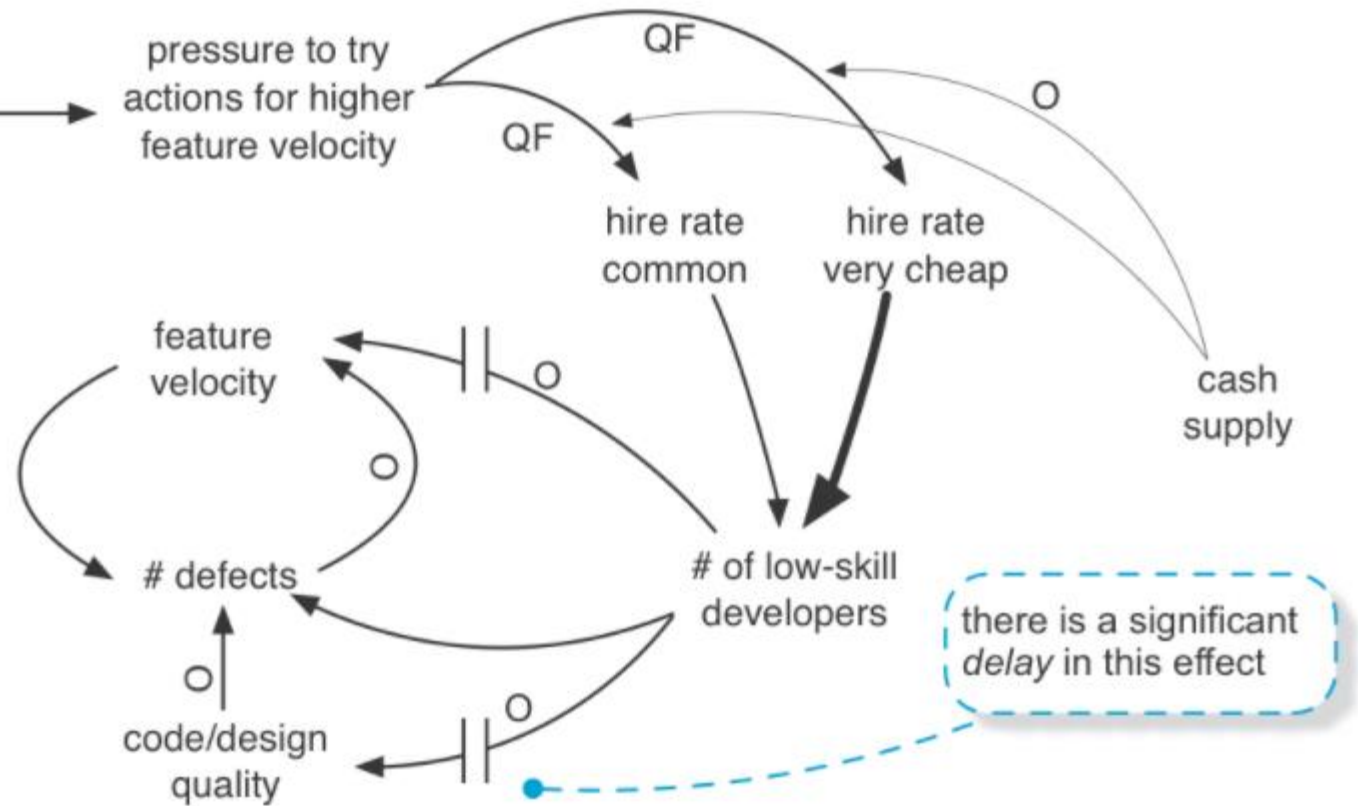


<https://less.works/less/principles/systems-thinking>

Seeing, Thinking & Modelling The System

My
Boss:

Goal: higher
feature
velocity



<https://less.works/less/principles/systems-thinking>

Seeing, Thinking & Modelling The System



Brooks's Law: Adding manpower to a late software project makes it later.

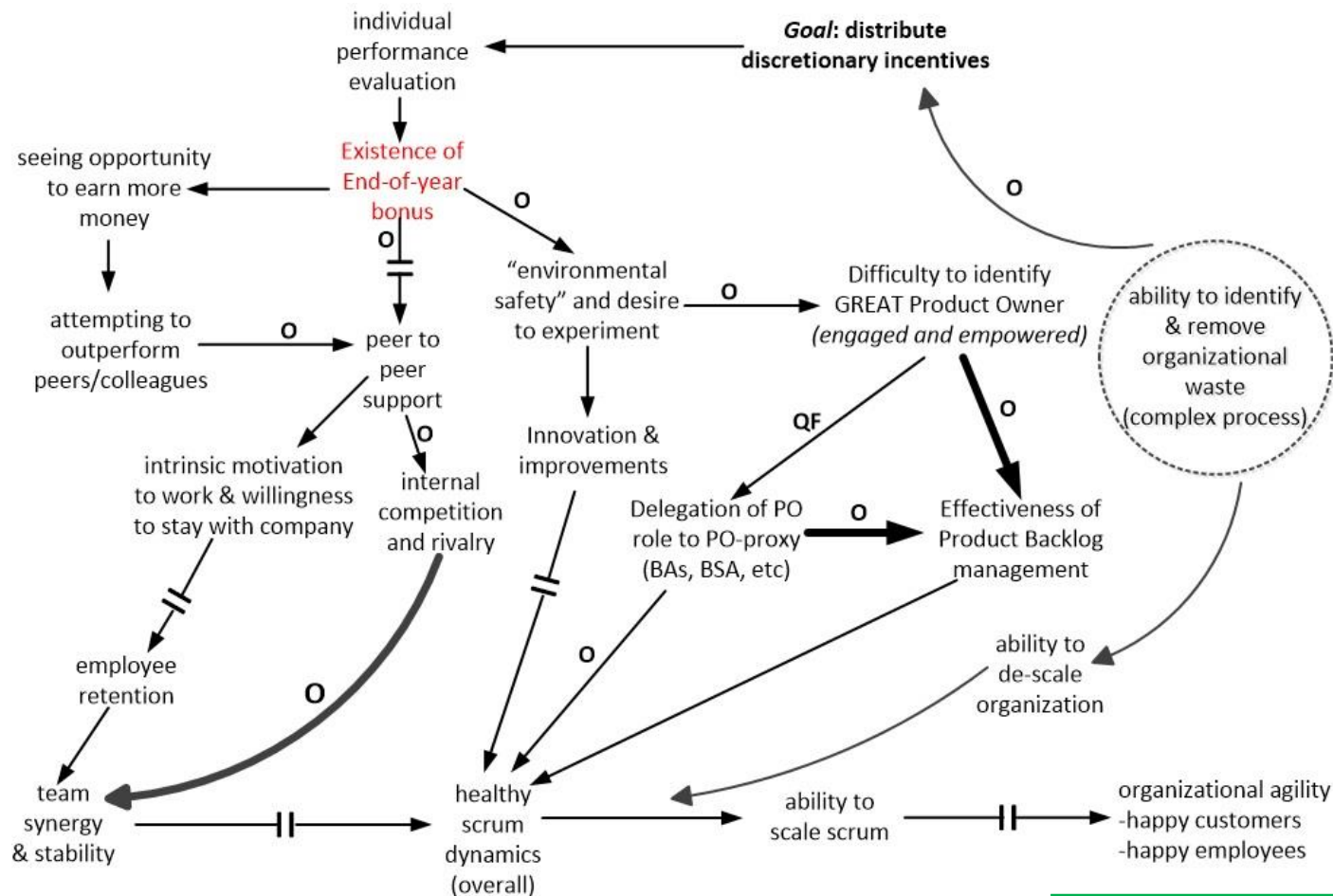
(Fred Brooks)

CONWAY'S LAW

"Any organization that designs a system will inevitably produce a design whose structure is a copy of the organization's communication structure."
Melvin E. Conway



Seeing, Thinking & Modelling The System



NB: variables that strongly relate to **system optimizing goals** can be highlighted

Seeing, Thinking & Modelling The System

Here are some elements of CLDs that I use in my graphics:

- Goals — A high, overarching/strategic goal that needs to be achieved
- Variables — System elements that have an effect or influence on other system elements (other variables)
- Causal links — Arrows that connect two related variables
- Opposite effects — “O” annotation near an arrow; suggests that the effect of one variable on another is the *opposite* of what could be expected
- Delayed effect — “||” annotation that disrupts a causal link (arrow); it implies that there is a delayed effect of one variable by another variable
- Extreme effects — One variable has an extreme (beyond normal) effect on another variable; it is represented by a thick arrow
- Constraints — “C” annotation near arrow; implies that there is a constraint on a variable
- Quick-fix reactions — “QF” annotation near an arrow; action that brings about short-term, lower-cost effect

Seeing, Thinking & Modelling The System

**Linear Thinking Does Not
Really Help Much...
In Complex
Organizational Settings**



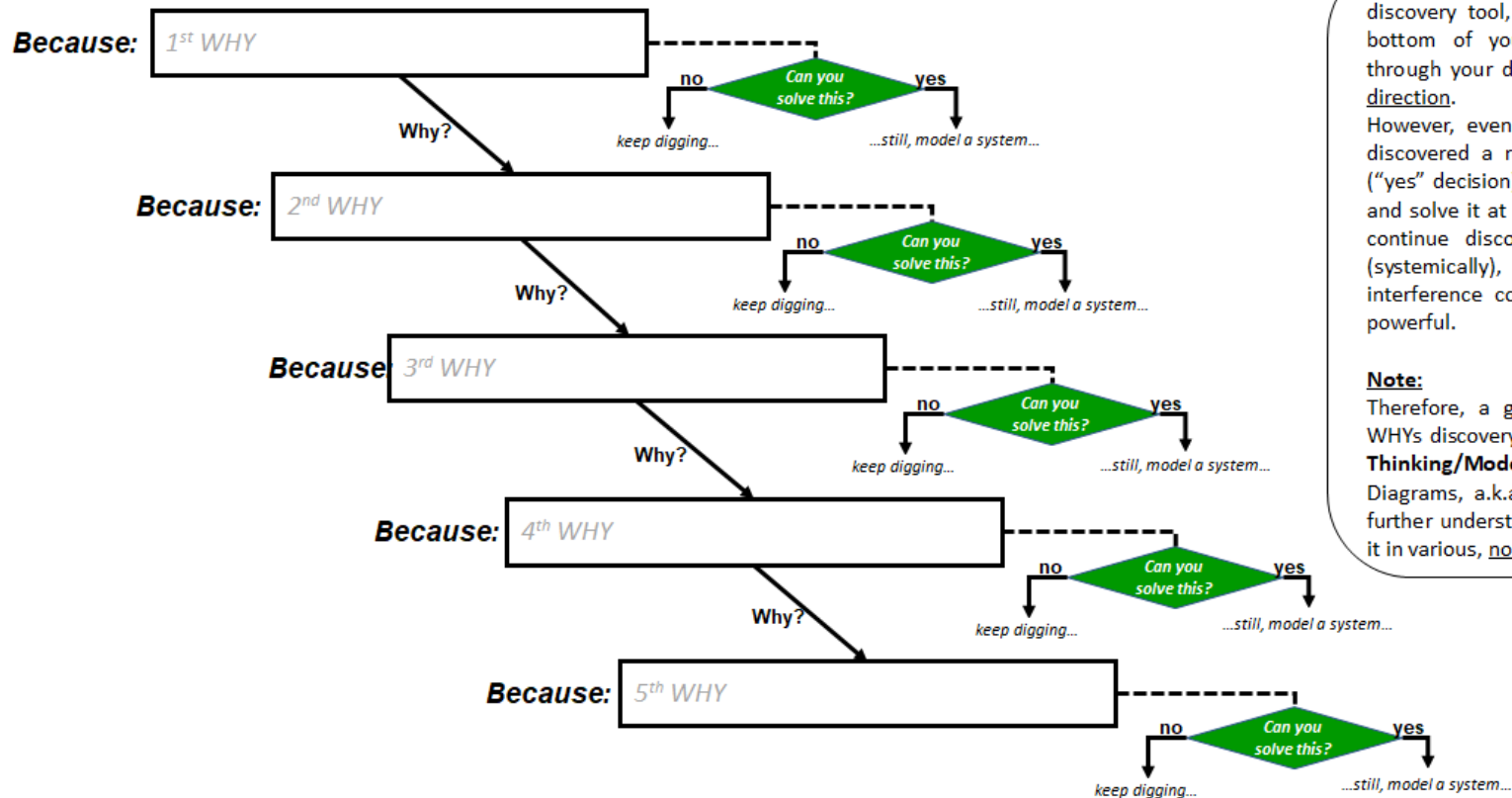
Seeing, Thinking & Modelling The System

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Therefore, a great continuation of the 5 WHYs discovery approach, could be **System Thinking/Modelling** (e.g. Causal Loop Diagrams, a.k.a. CLD), by which you can further understand the system, by exploring it in various, non-linear directions.

LeSS Principles

9

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.

10

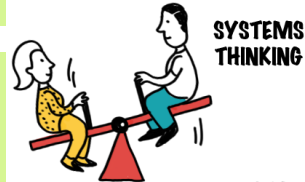
It is not "new and improved Scrum." LeSS is about applying the principles, elements, and purpose of Scrum in a large-scale context. Multiple-team Scrum, not multiple Scrum teams.

1

Based on tangible 'done' items, short cycles, working together, common definitions, and driving out fear in the workplace.

8

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.

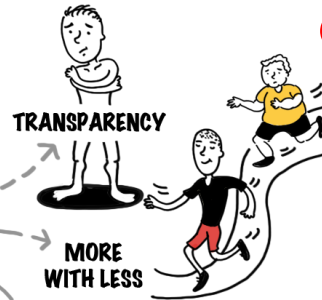


7

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.

6

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.



2

(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



3

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.

CONTINUOUS IMPROVEMENT TOWARDS PERFECTION



CUSTOMER CENTRIC



4

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.

5

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.

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Sourced from: <https://less.works/resources/graphics/index.html>

Class Activity

Class:

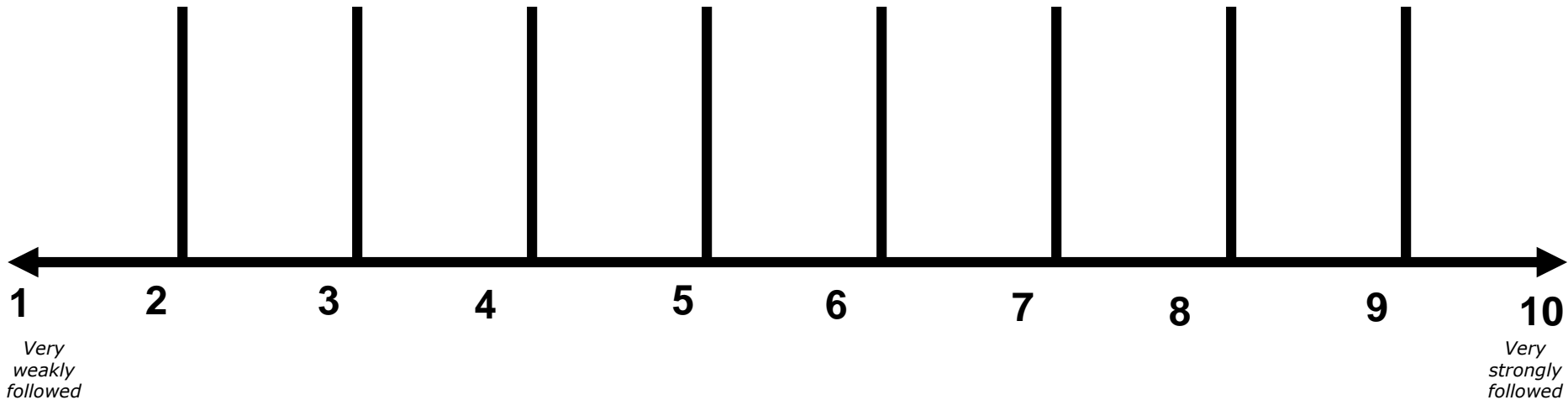
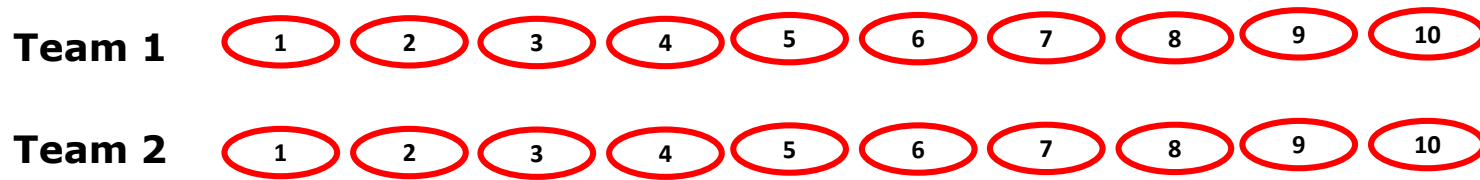
- Work in teams: discuss which mentioned principles are currently followed in your organization. Which ones are not?
- For the ones that **are followed**, plot on the scale from 1 to 10, to what degree they are being followed.

Instructor: Catalyze. Reflect.

Duration: 10 min



LeSS Principles



LeSS Rules: *LeSS Structure*

1. Structure the organization using **real teams** as the basic organizational building block.
2. Each team is (1) **self-managing**, (2) **cross-functional**, (3) *co-located*, and (4) **long-lived**.
3. The majority of the teams are **customer-focused feature teams**.
4. 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**.
5. A Scrum Master is a dedicated **full-time role**.
6. One Scrum Master can serve **1-3 teams**.
7. 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.
8. Managers' role is to improve the product development system by practicing **Go See**, encouraging Stop & Fix, and "experiments over conformance".
9. For the product group, establish the **complete LeSS structure "at the start"**; this is vital for a LeSS adoption.
10. 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.

Sourced from: <https://less.works/less/rules/index>

LeSS Rules: *LeSS Product*

1. There is **one Product Owner** and **one Product Backlog** for the complete shippable product.
2. 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.
3. All **prioritization** goes through the Product Owner, but **clarification** is as much as possible directly between the Teams and customer/users and other stakeholders.
4. 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.
5. One **Definition of Done** for the whole product common for all teams.
6. Each **team can have their own stronger** Definition of Done by expanding the common one.
7. The perfection goal is to **improve the Definition of Done** so that it results in a shippable product each Sprint (or even more frequently).

Sourced from: <https://less.works/less/rules/index>

LeSS Rules: *LeSS Sprint*

1. 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**.
2. 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.
3. 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.
4. Each Team has their own **Sprint Backlog**.
5. 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.
6. Each Team has their **own Daily Scrum**.
7. 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.
8. Product Backlog Refinement (**PBR**) is preferably done with multiple teams to increase shared learning and to exploit coordination opportunities.
9. 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.
10. Each Team has their **own Sprint Retrospective**.
11. 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).

Sourced from: <https://less.works/less/rules/index>

Class Activity

Class:

- Work in teams. Discuss: what LeSS Rules are **the same as** in **Scrum** and **what are not** (e.g. either different or not applicable at all)
- For the ones that are **the same**, plot on the scale, from 1 to 10: to what degree, at your respective organizations, these rules are being followed.

Instructor: Catalyze. Reflect.

Duration: 15 min



LeSS Rules

LeSS Structure

Real Teams (not groups and not by reporting lines)	1
Each Team -self-managing -cross-functional -co-located -long-lived	2
customer-focused feature teams	3
Scrum Master: Full-time role 1-3 teams	4
Scrum Master: -Responsible for LeSS Adoption -Focus on: PO, Teams, Organization, Dev practices	5

Managers: -Are OPTIONAL -Must be @ Gemba (GO SEE)	6
LeSS product group (2-8 teams): complete LeSS structure “at the start”	7
Beyond LeSS product group (e.g. LeSS Huge) – evolutionarily adoption	8

One Product Owner	9
One Backlog	10
Prioritization – comes from Product Owner ONLY	11
Multiple teams working directly with customers/users and stakeholders	12
Clarification – comes from users /stakeholders	13

LeSS Product


Product definition - broad and end-user/customer centric as is practical	14
DoD - shared by all teams	15
Team DoD can be stronger than shared DoD	16
Big goal: improve DoD, with each sprint	17

LeSS Sprint

One product-level Sprint, to deliver integrated whole product	18
Sprint Planning – two parts: Part 1 and Part 2	19
SP Part 1 – by team reps & PO (“WHAT”)	20
Each team – their own SPRINT backlog	21
SP Part 2 –whole teams & Users (“HOW”)	22
De-centralized and informal coordination. Just talk	23
PBR – by multiple teams.	24
Sprint Review: common for all teams + PO + stakeholders/users	25
Sprint (Team) Retrospective – individual for each team	26
Overall Retrospective – individual for each team	27
Each team – their own Daily Scrum	28

Relevance To Scrum:

 - Same as in Scrum

 - Different or Not Applicable

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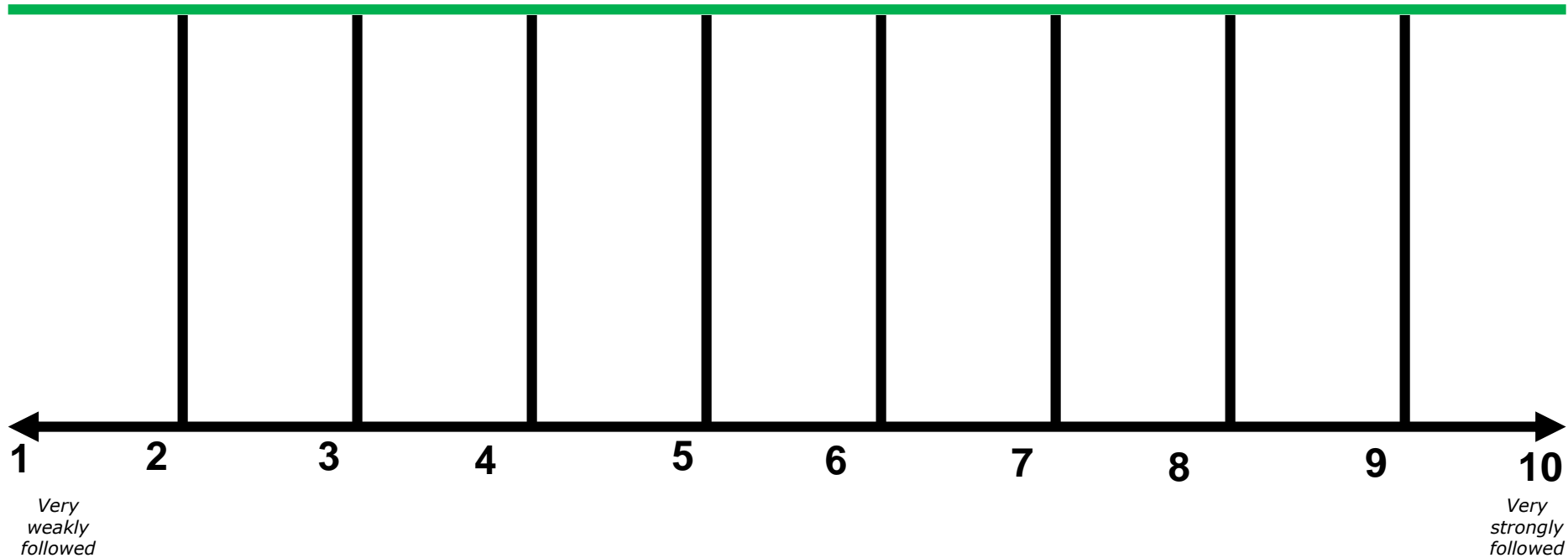
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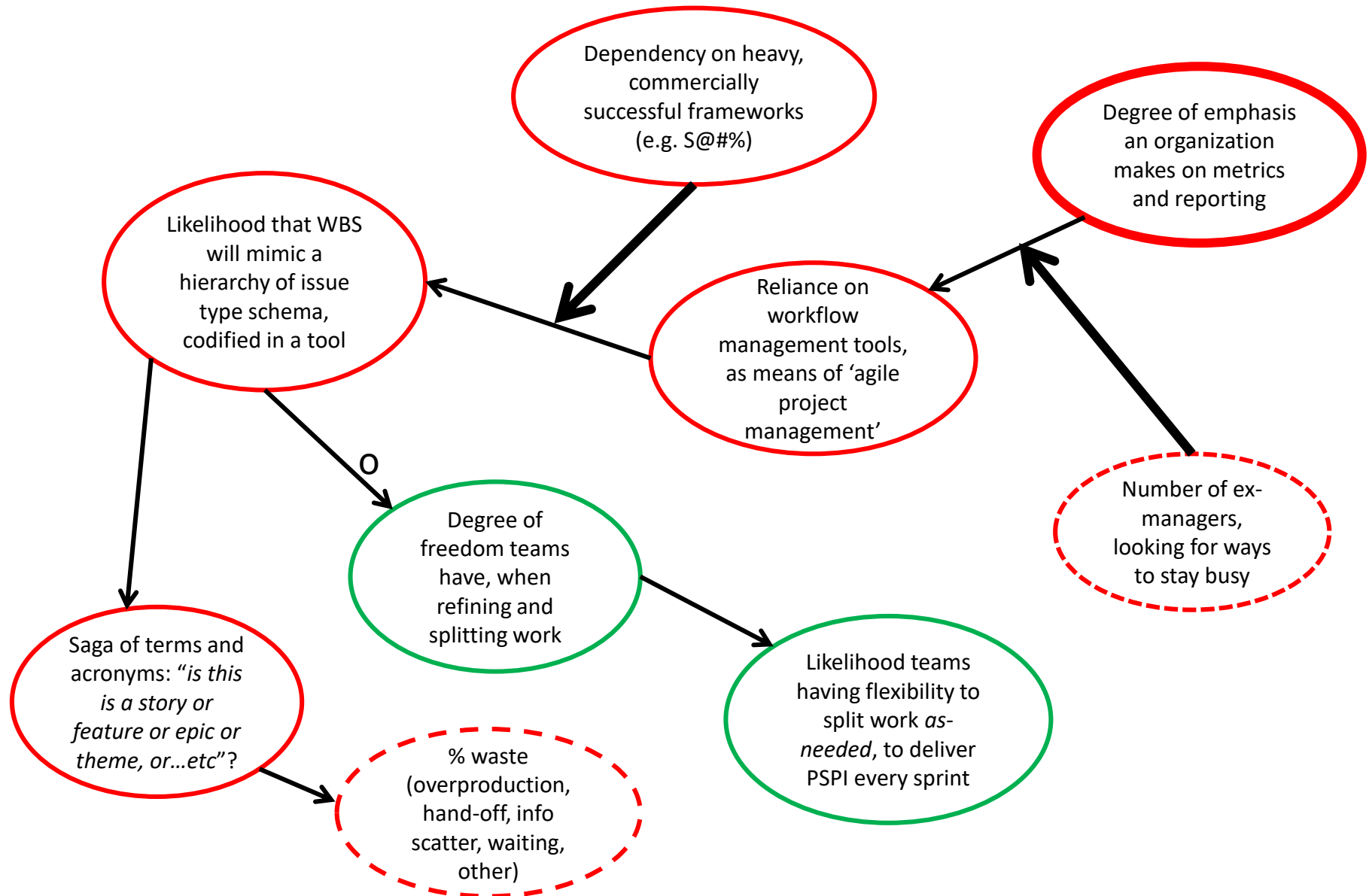
 - Different or Not Applicable

LeSS Rules

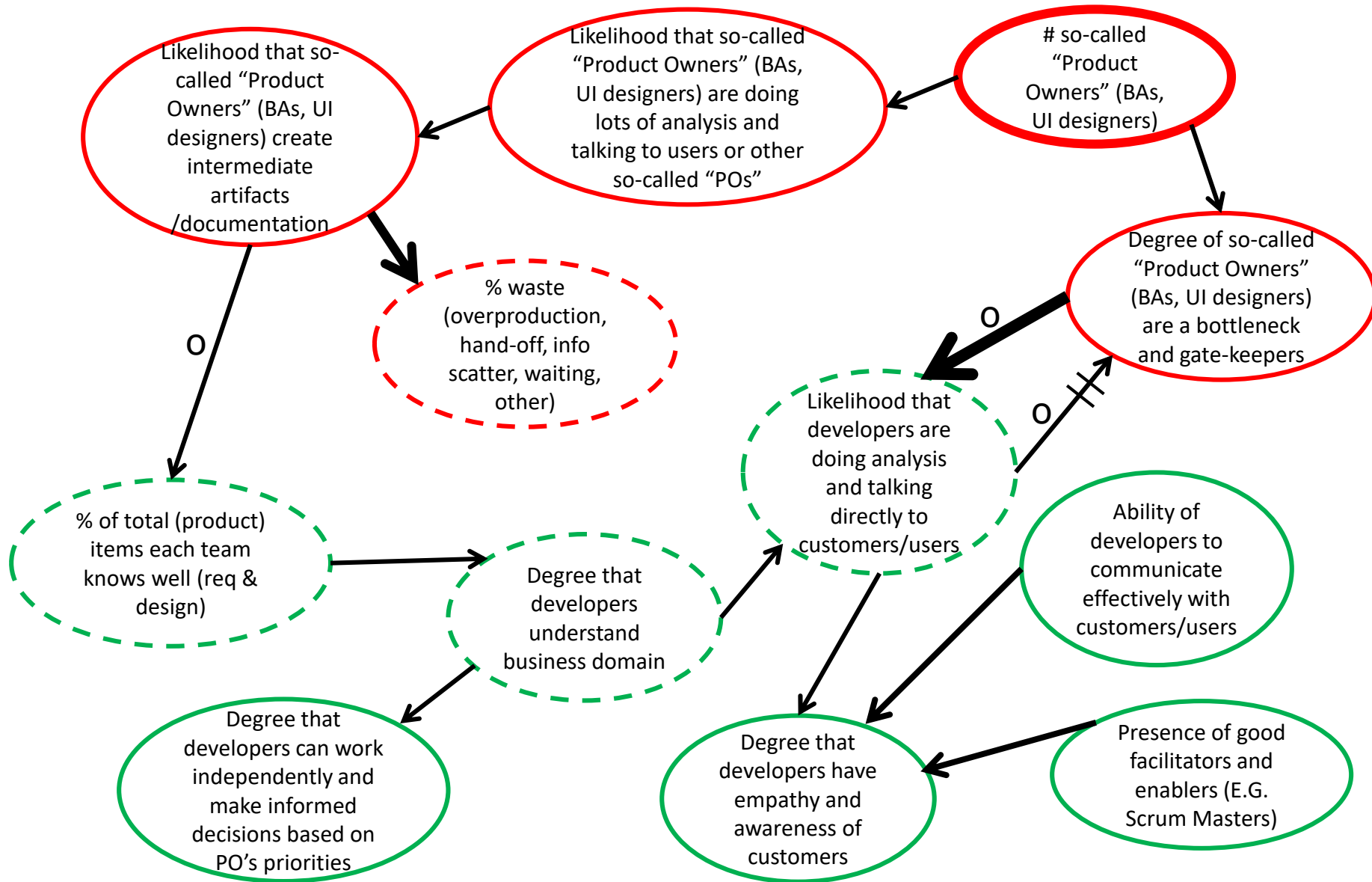
1	2	3	4	5	6	7	8	9	10	11	12	13	14
15	16	17	18	19	20	21	22	23	24	25	26	27	28



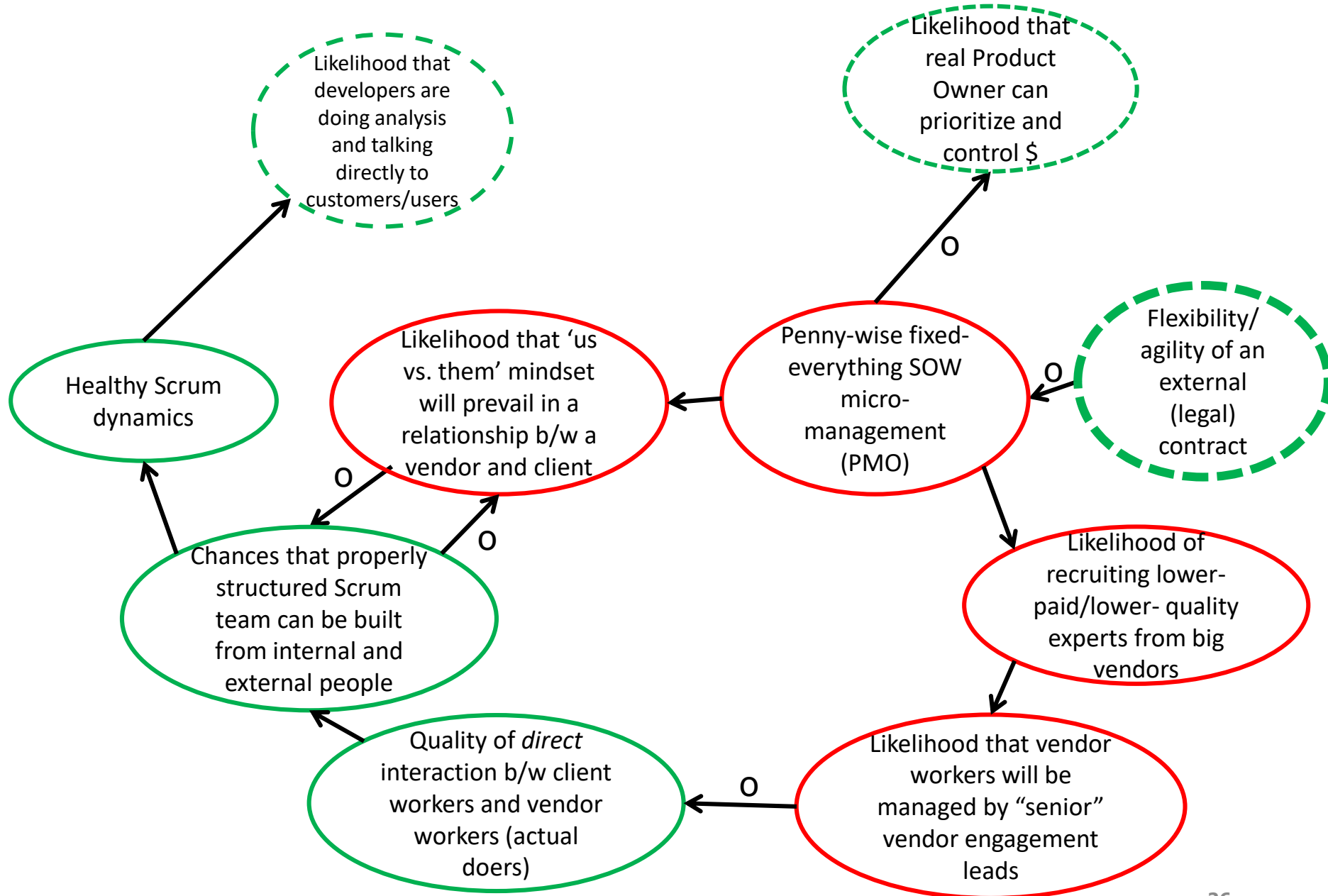
Local Optimization in Tool-Driven WBS - Exercise



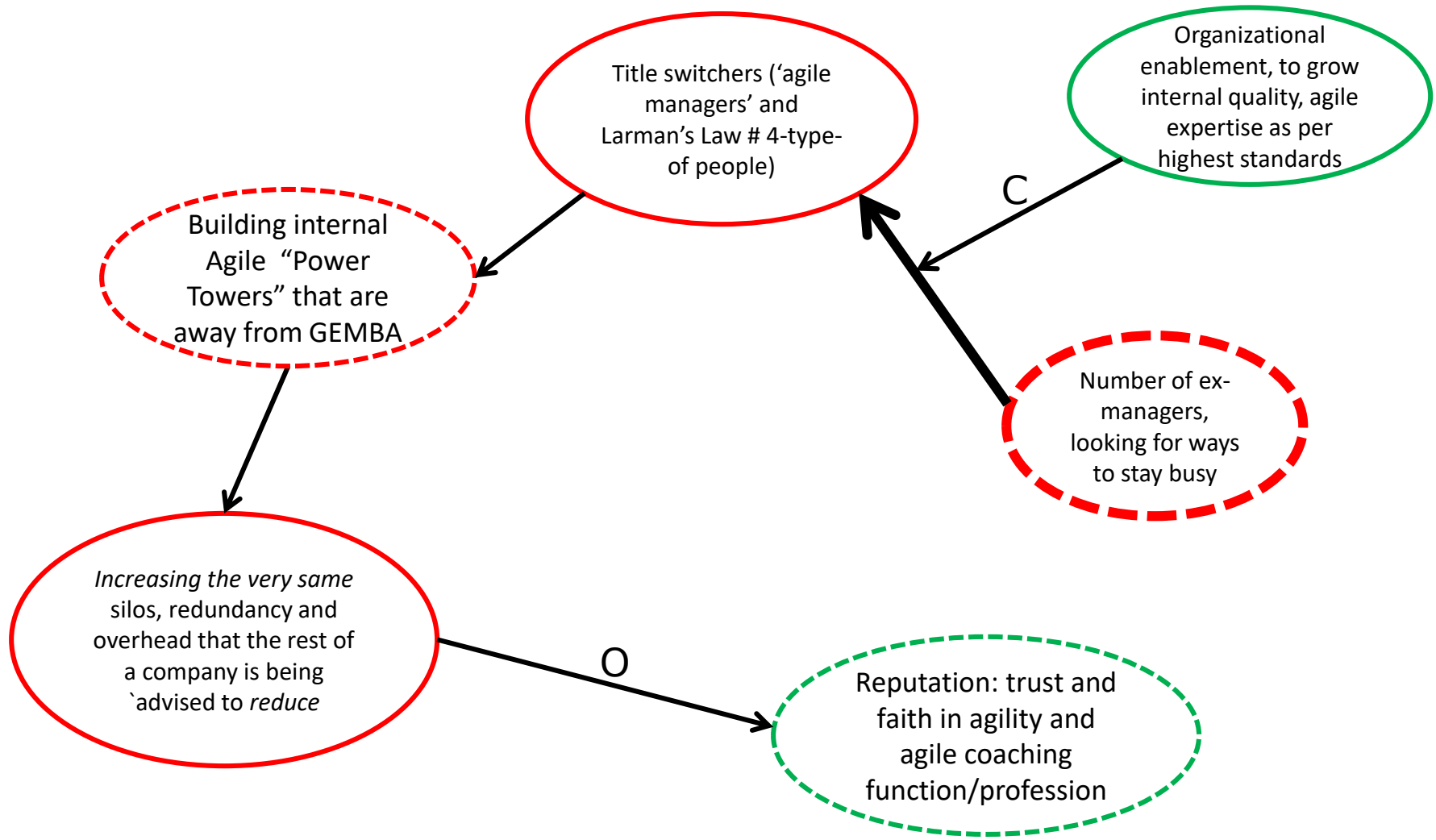
Local Optimization in **Analysis & Design**- Exercise



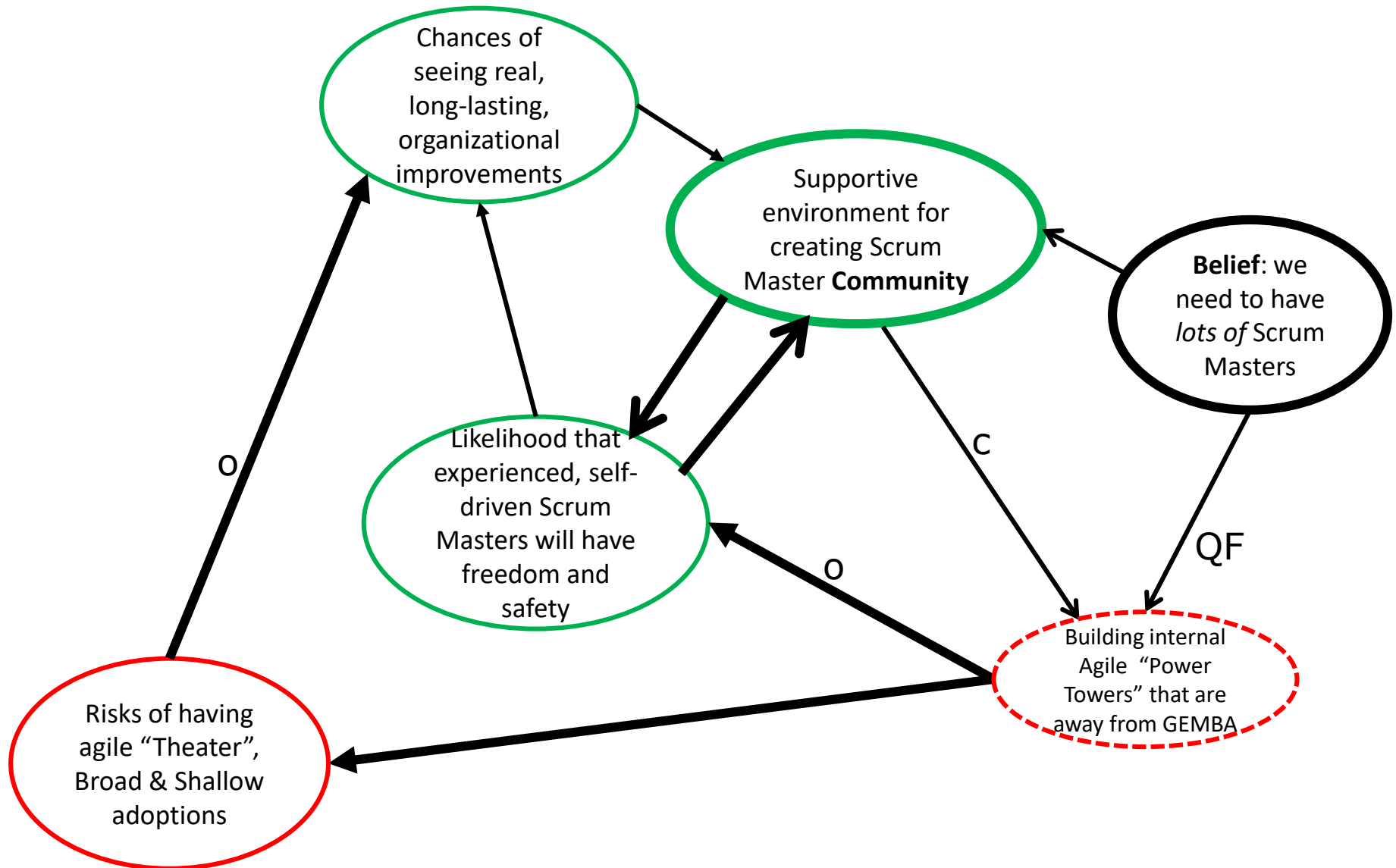
Local Optimization in **Internal Contracts** - Exercise



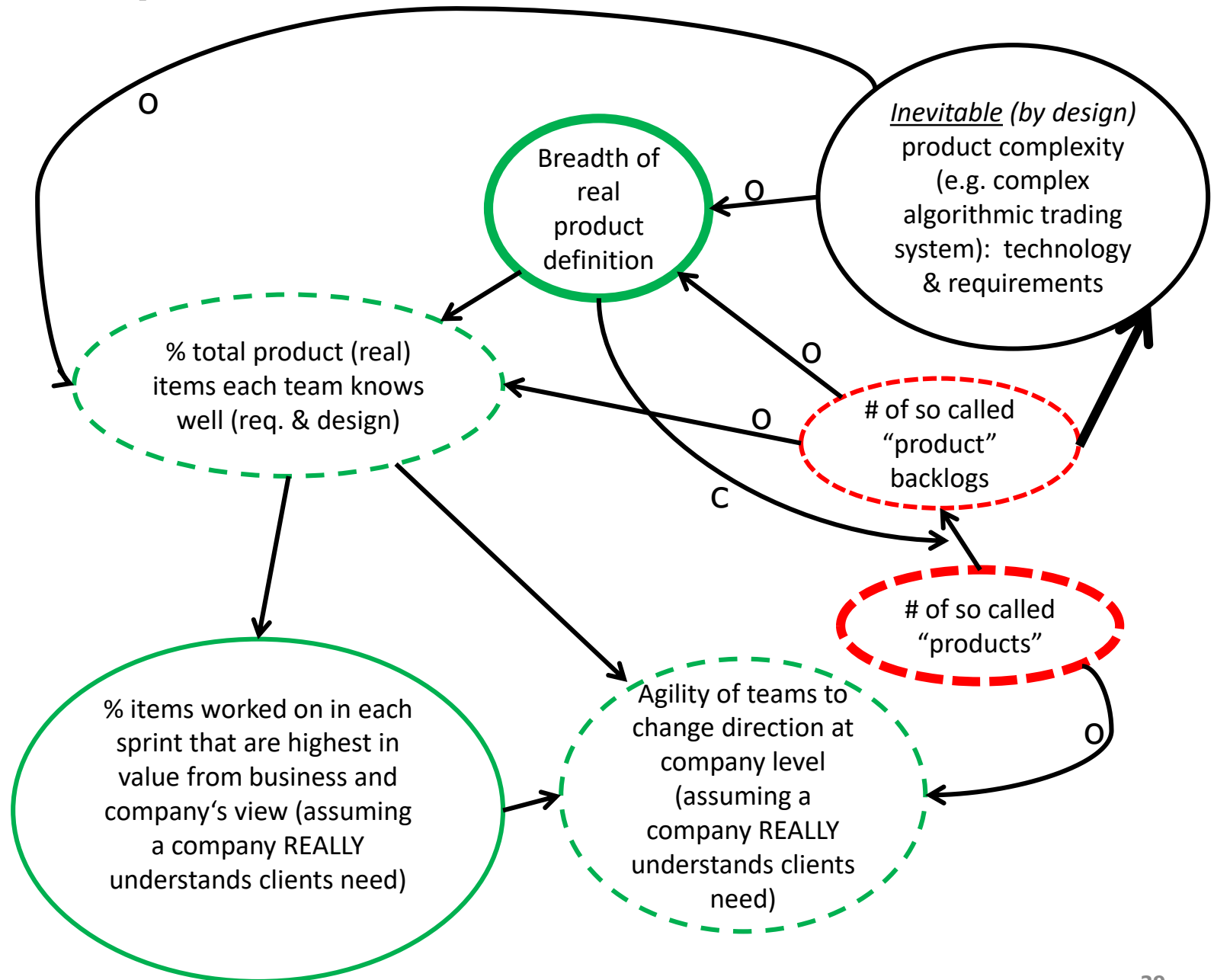
Local Optimization in Agile Leadership - Exercise



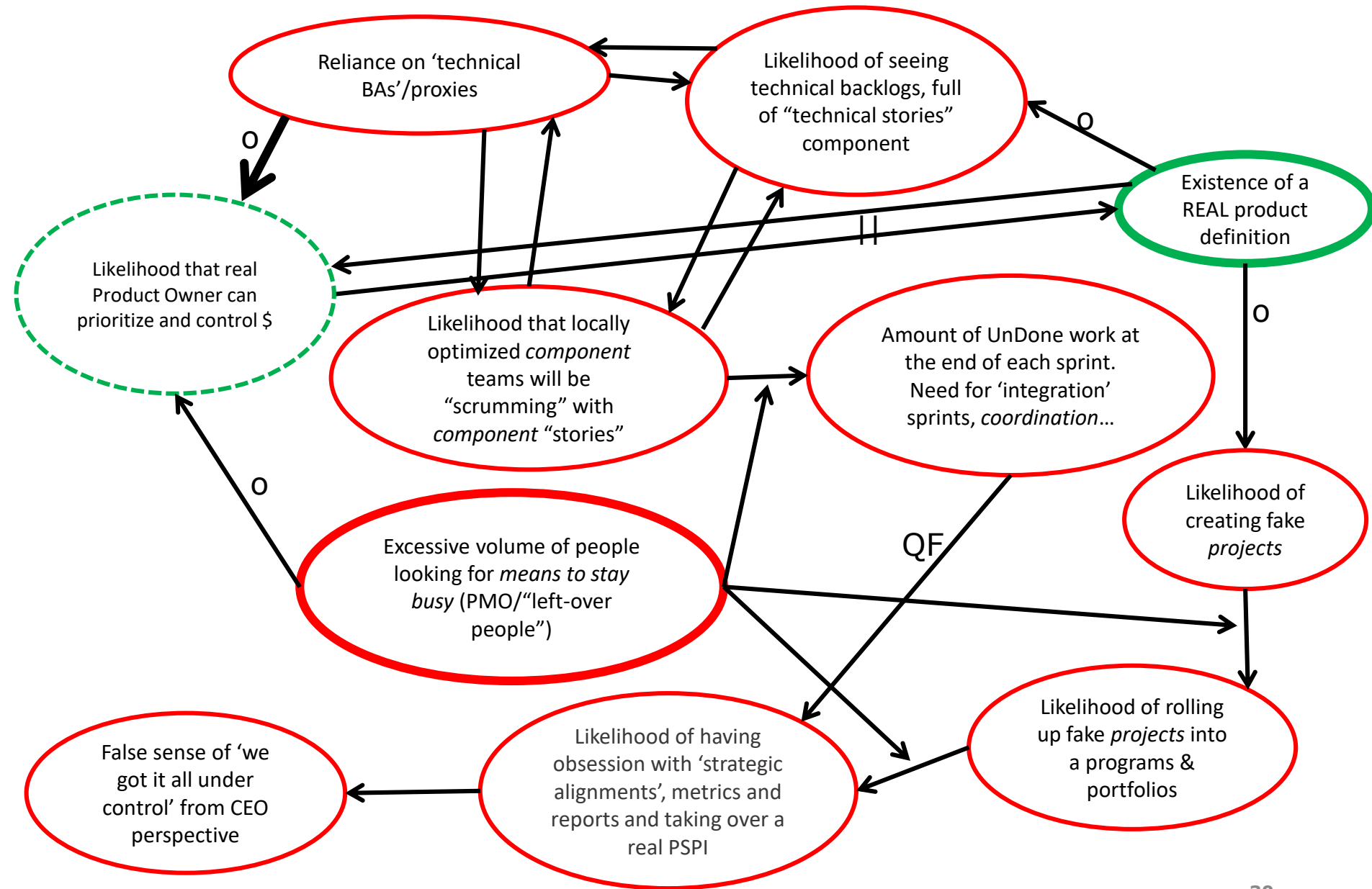
Local Optimization in **Scrum Master Role** - Exercise



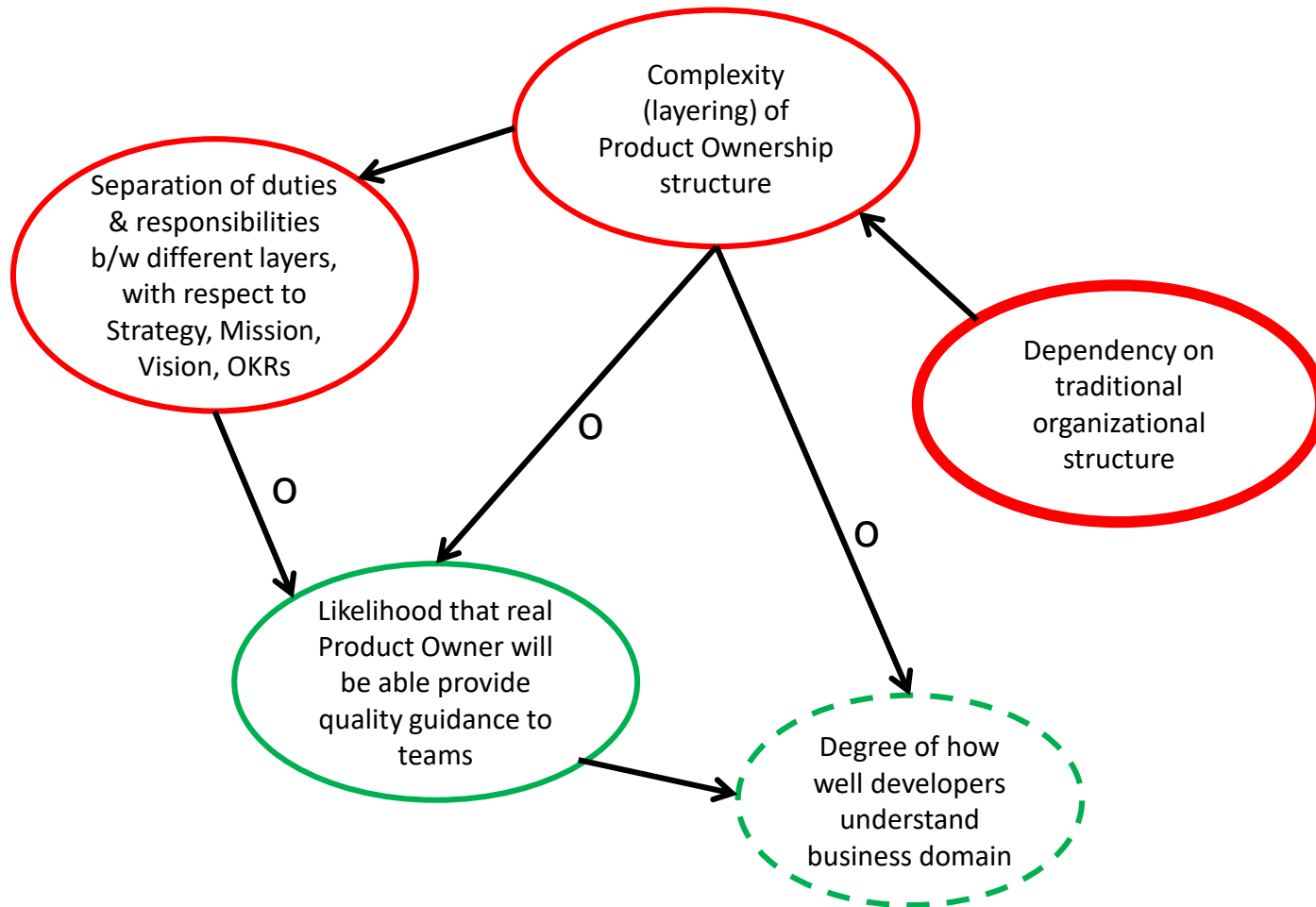
Local Optimization in **Product Definition** - Exercise



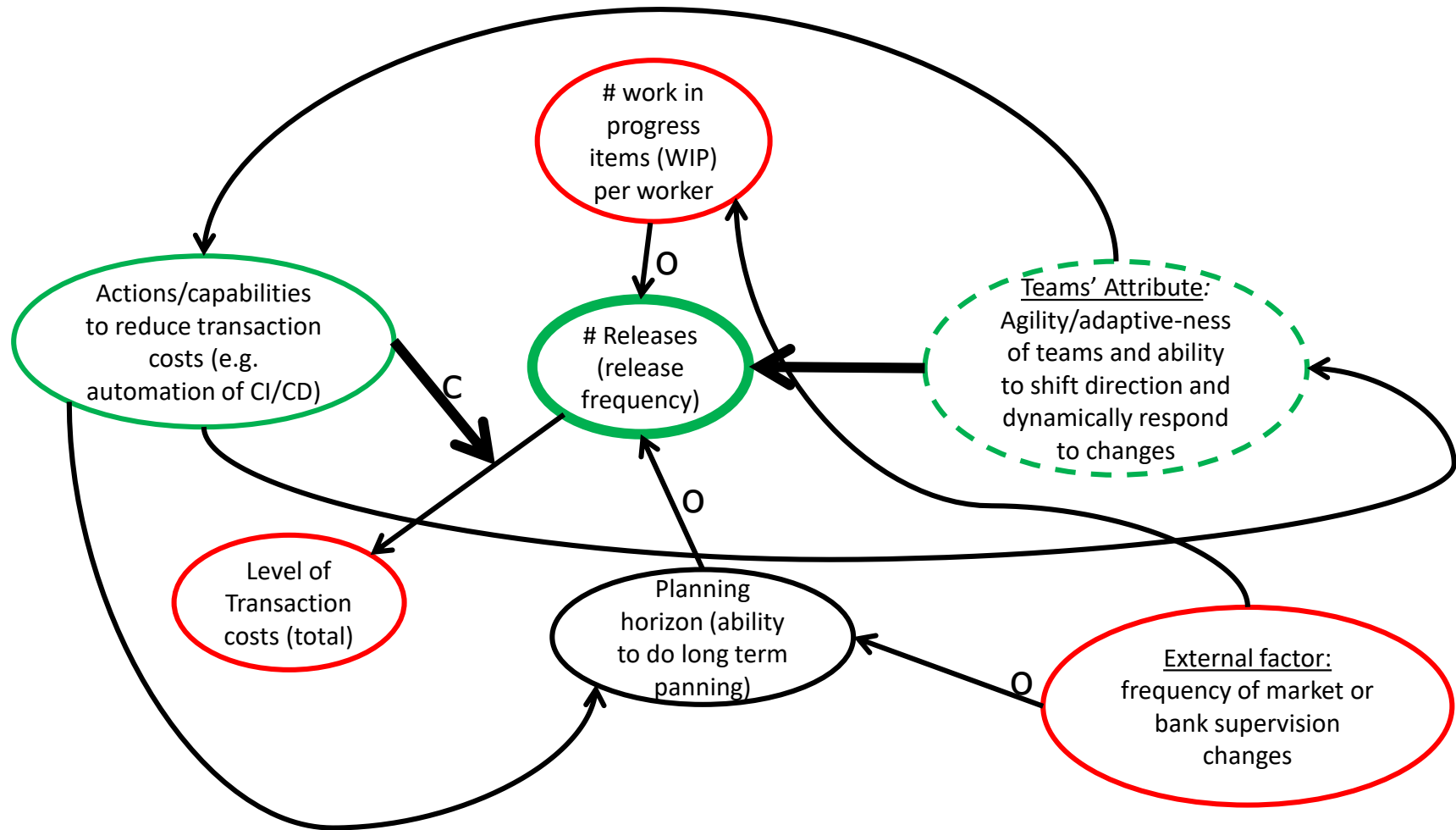
Local Optimization in Roles & WBS - Exercise



Local Optimization in **PO-ship Structure**- Exercise



Local Optimization in **Releasing** - Exercise



Local Optimization in **Product Backlog** - Exercise

