

I Wonder Why? – a Systems Thinking Workshop



Hello!

I am **Dhaval Panchal**

I am here because I want to share how to think in systems.

You can find me at www.evolveagility.com

1

Opening: Alarm bells

Just five more minutes, office space, iceberg ahoy!

3



a Workshop

- Masks please
- Learn together to grow together
- Be respectful of each others needs
- Be mindful of activity time boxes
- Be present, participate, have fun!
- Its ok to let others “win” arguments
- Q&A at the end

4

3

Ice-Breaker [2 mins]






Table share

- How many alarms do you use to get up in the morning?

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5



Events that start my day

In the morning I **will** myself out of bed and then we **get into our frantic daily routine**. Tensions rise as we try to get our children ready for school because it is difficult to find **their items**. Their water bottles or lunch boxes are not where they are supposed to be. Why can't things be put in their proper place? If only all things were kept in their **proper place**, it would be so much **easier to get ready** for the day.

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6



Source: <https://youtu.be/sDEL4Ty950Q>

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7

**Jumping to conclusions
is NOT
Systems Thinking**

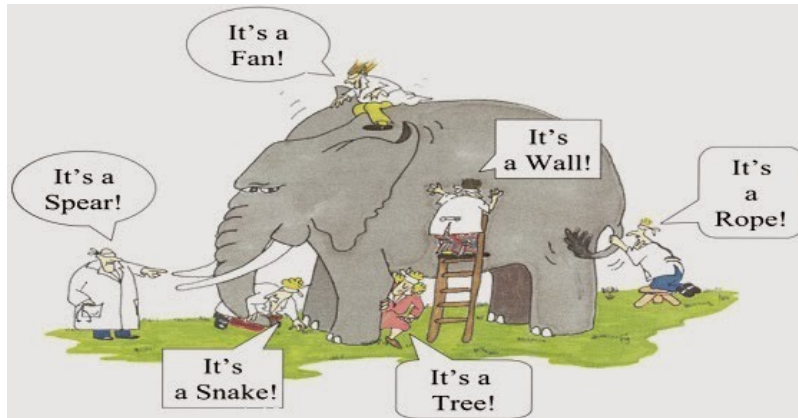


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8



Elephant and the blind men



Elephant in the room

- Challenges are perceived and experienced differently by every individual
- Some may be paying an unfair price to cope with the problem
- No one may see the whole problem



Systems Thinking

Events

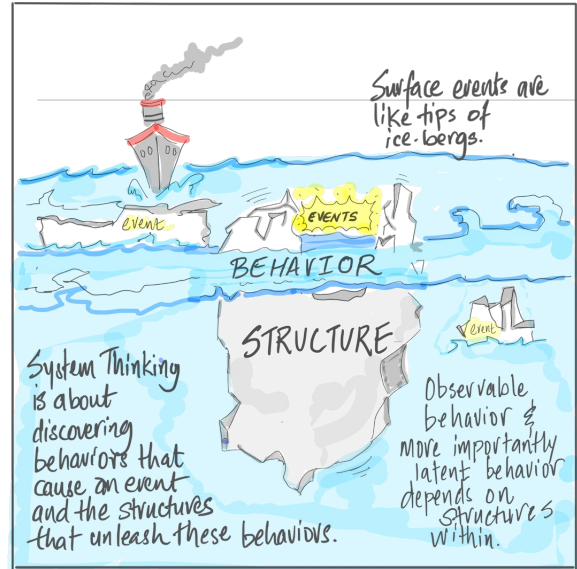
Facts as presented, witnessed, and interpreted.

Behavior/Patterns

Trends, or changes in events over time.

Structure

Invisible interrelationships of systems parts, that can be detected by the evidence it leaves behind.



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[1 min]



I wonder why I'm always rushing to get ready

Also available in your handout

I had snoozed my alarm a couple of times already. Getting up on first alarm would give me more time for morning routine. Starting my day refreshed would make it easier for us to get the kids ready. But even when my spouse impatiently nudges me to wake up, I say "just five more minutes". Hoping that a little extra time in bed will energize me to start the day.

The night before

Post dinner snacks while watching television is my favorite way to unwind at the end of the day. I'm prone to get caught up in a series and watch one too many episodes late into the night. And a refill of my favorite snacks usually follows when I cue in another episode. I know better not to snack or watch television late into midnight because it makes it difficult to fall asleep. Not enough sleep impacts my ability to wake up on first alarm.



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2

Workshop: Section 1 Simplified Cause & Effect Modeling

More or less, picture > 1000 words, not a presentation



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13



Workshop Structure

- Table group works on **only one** puzzle
- Three puzzles at different **resolutions**
 1. Individual
 2. Team
 3. Organization
- I will use "rushing to get ready" as reference puzzle so as to provide **instructions**



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14



Preparatory Steps before modeling

1. Identify a topic or a story
2. Engage in **dialogue** with people (actors) in the story
3. **Write** down your story concisely
4. Choose 5-8 **factors/elements** that are important to changes in the story: *they increase or decrease in the story*
5. Express these elements as **nouns** or **noun phrases**
6. Secure collaborative agreement on the narrative
7. **Avoid** jumping to conclusions

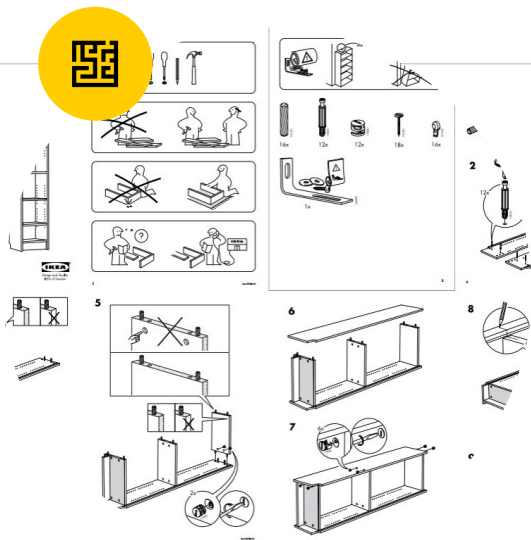
These steps are already completed for your puzzles in this workshop.
IRL complete steps above by collaborating with people in your organization



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15

[3 mins]



Puzzle Selection

- Three puzzles at different resolutions
 1. I wonder why people change or resist change (individual)
 2. I wonder why the team is not able to complete all items within their sprint (team)
 3. I wonder why managers focus on metrics and meetings so much (organization)
- Agree as a table to **pick one puzzle** statement to work on
- Select **table facilitator**



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16

[3 mins]



Silent Review



- Silently read *the story* (narrative) of your selected/assigned puzzle
- Familiarize with **pre-selected** factors/elements of your puzzle

These are my stories and I'm sticking with it

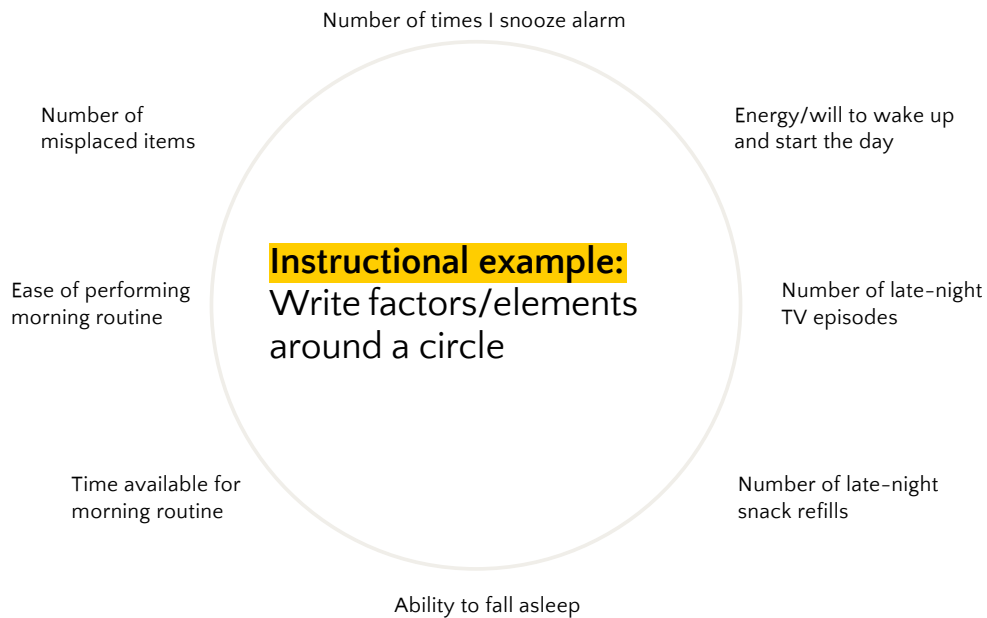
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17

Puzzle: *I wonder why I'm always rushing to get ready*



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[3 mins]

Write factors/elements around the circle



You require only one per table, but you may need a backup so prepare at least two per table. (*hint: divide and conquer*)



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19



Simplified **cause → effect** modeling

1. Reference your puzzle narrative for evidence of causal relationship between factors/elements
2. Does increase or decrease in a factor cause an increase or decrease in another factor?
3. Draw an arrow from cause → effect

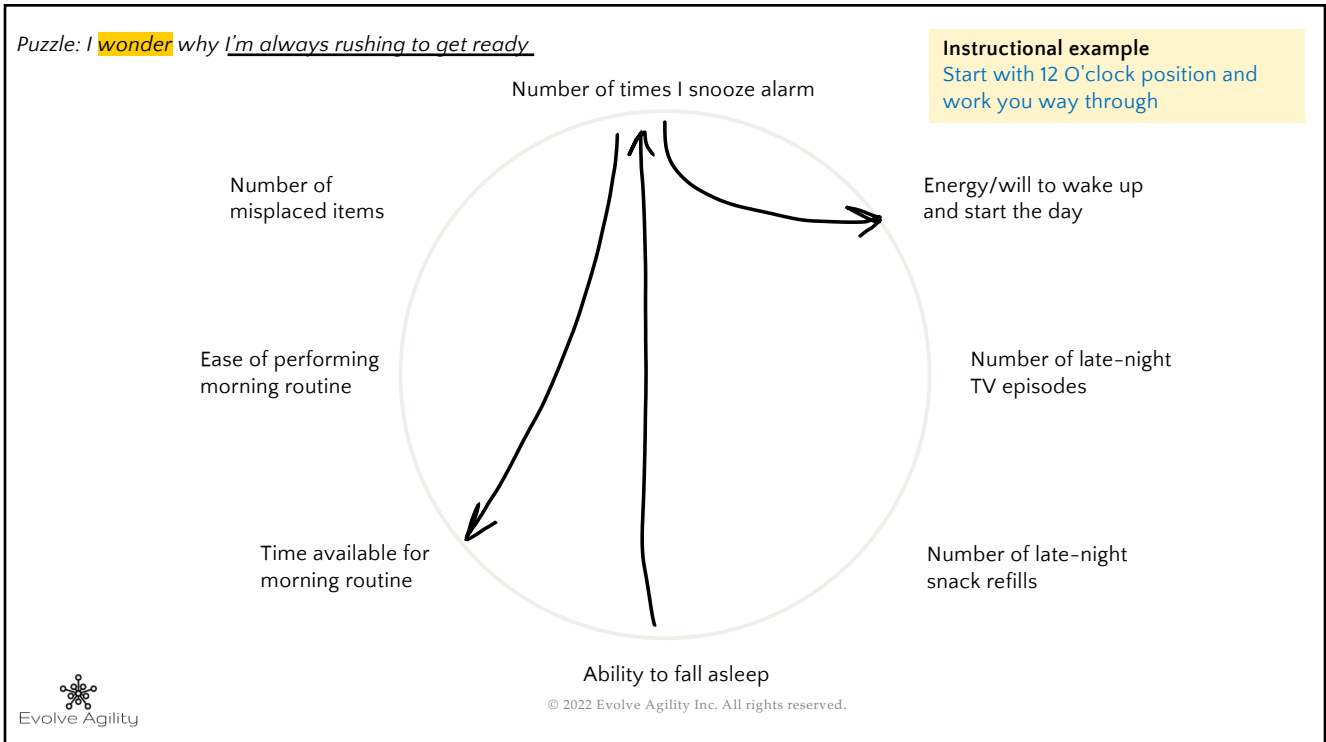
Tips

- Pick **only** most dominant direction for arrow
- Start with the factor at 12 O'clock position and work your way through remaining factors in clockwise direction
- Then select the next factor in clockwise direction and work your way through the now remaining factors in clockwise direction

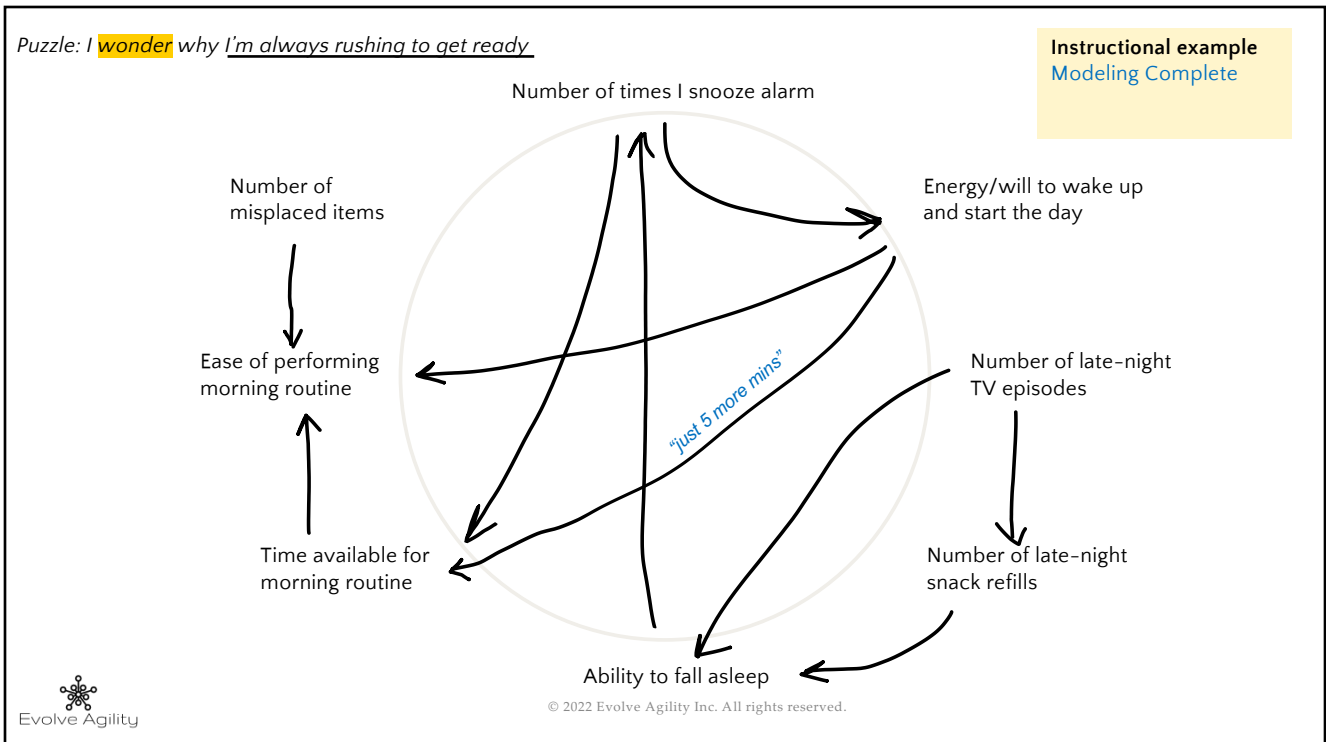


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20



21



22

[15 mins]



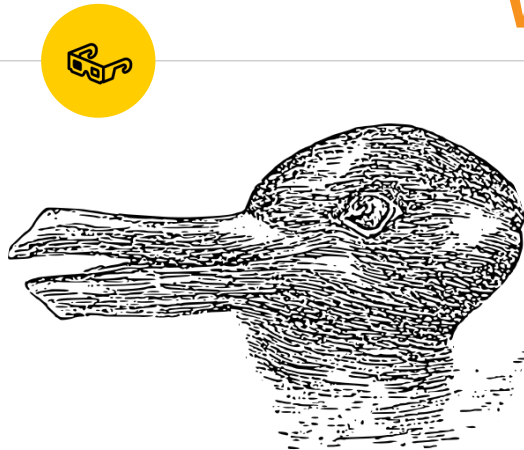
Let's dive In

[Model: Part 1 of 2]

Gentle reminders:

- Try to keep *cause* -> *effect* modeling consistent with puzzle narrative
- We model to engage in dialogue
- People may interpret same set of facts differently, and that is OK.
- Seek to understand before you ask to be understood.

What do you see?



- No two groups will likely have the same results, because they had different conversations, interpretations, and shared understanding.
- Modeled diagram will make most sense to the participants who created it
- Do not present to others as “truth” – there will always be blind spots. Engage them in modeling your systems together with you

Whiteboards (Physical, not electronic) are the most effective for modeling

3

Workshop: Section 2 Analysis & Insights

"so what?, but I know that already, then don't do it"



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25

Puzzle: I **wonder** why I'm always rushing to get ready

Instructional example
Modeling Complete
Count "ins" and "outs"

IN	OUT
1	0

Number of misplaced items

IN	OUT
3	0

Ease of performing morning routine

IN	OUT
2	1

Time available for morning routine

IN	OUT
2	1

Ability to fall asleep

IN	OUT
1	2

Number of times I snooze alarm

IN	OUT
1	2

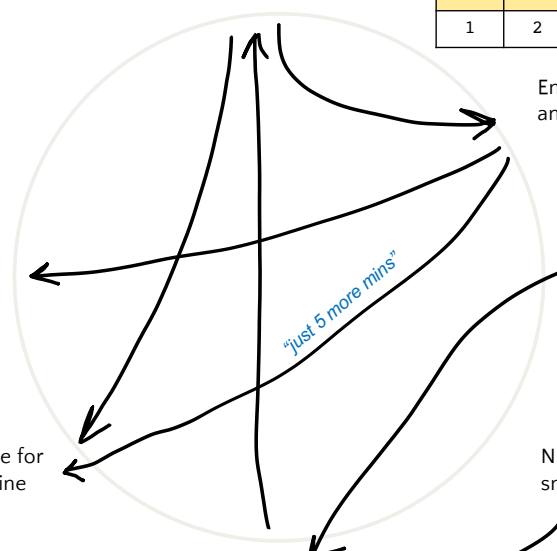
Energy/will to wake up and start the day

IN	OUT
0	2

Number of late-night TV episodes

IN	OUT
1	1

Number of late-night snack refills

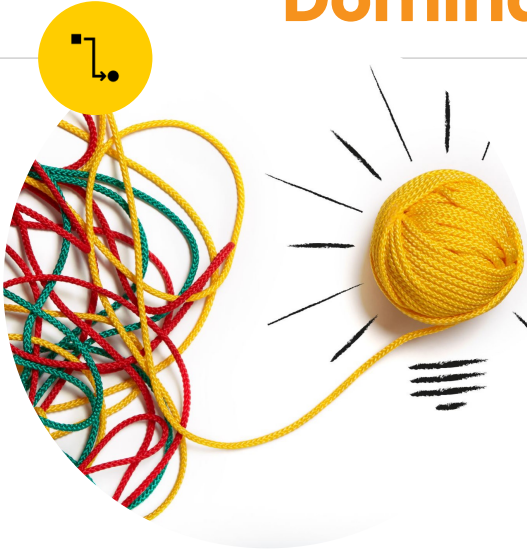


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26

[3 mins]

Dominant: Causes & Effects



[Analysis: Part 2 of 3]

For each element/factor in your puzzle

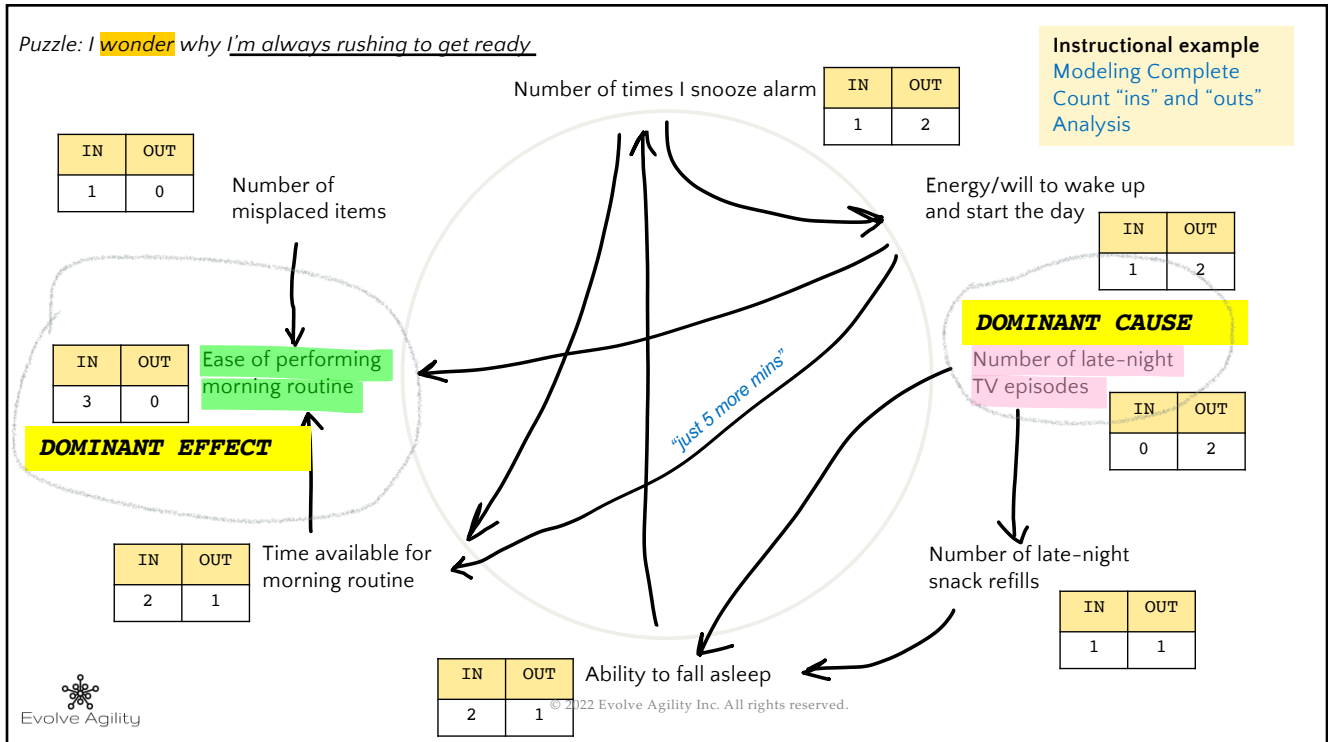
- Count number of arrows coming IN, and
- Count number of arrows going OUT
- Update your models



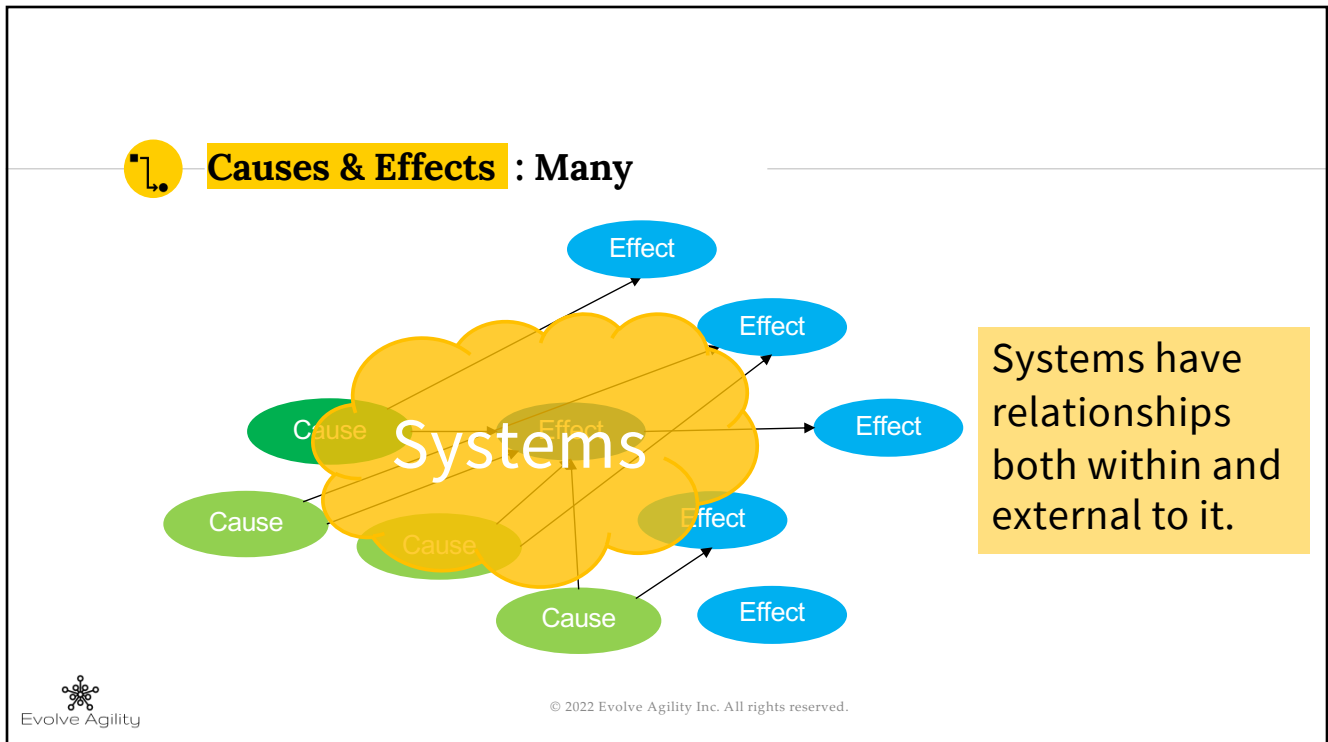
Quick fix: Don't Jump to conclusions

In the morning I will myself out of bed and then we get into our frantic daily routine. Tensions rise as we try to get our children ready for school because it is difficult to find their items. Their water bottles or lunch boxes are not where they are supposed to be. Why can't things be put in their proper place? **If only all things were kept in their proper place, it would be so much easier to get ready for the day.**



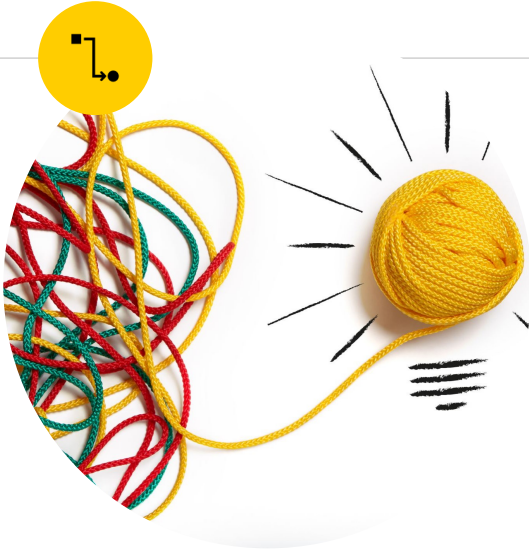


29



30

[5 mins]



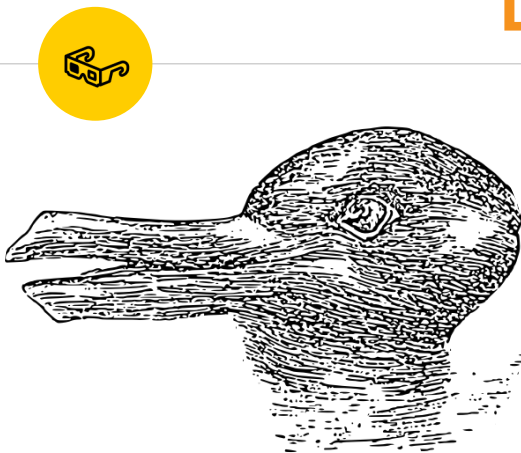
See systems at play

[Insights: Part 3 of 3]

Table Share

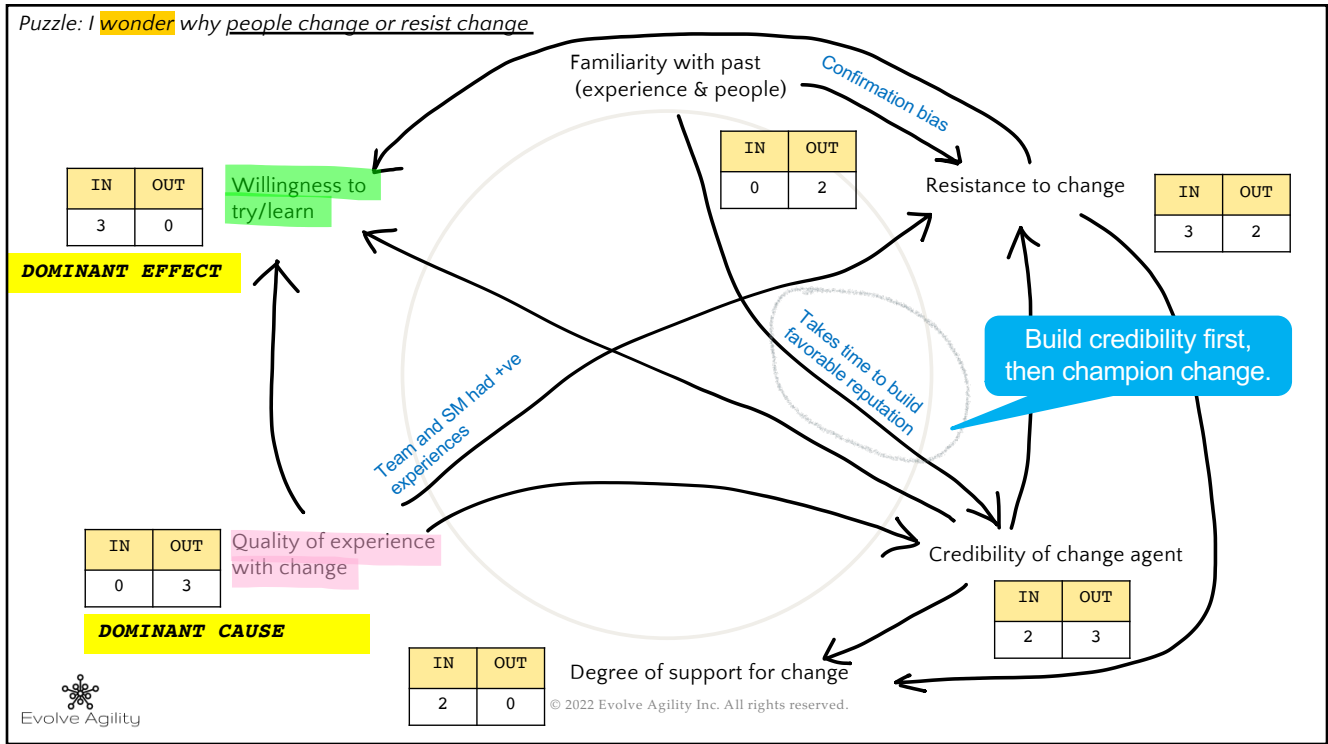
- Are there any **Dominant Causes** or **Dominant Effects** in your puzzles?
- What surprises you?
- What could you do differently?

Did we do it right?



- Your table modeled what your group interpreted
- No "right" or "wrong"
- Here's how your facilitator solved these puzzles

Your results may vary, and that is ok



33

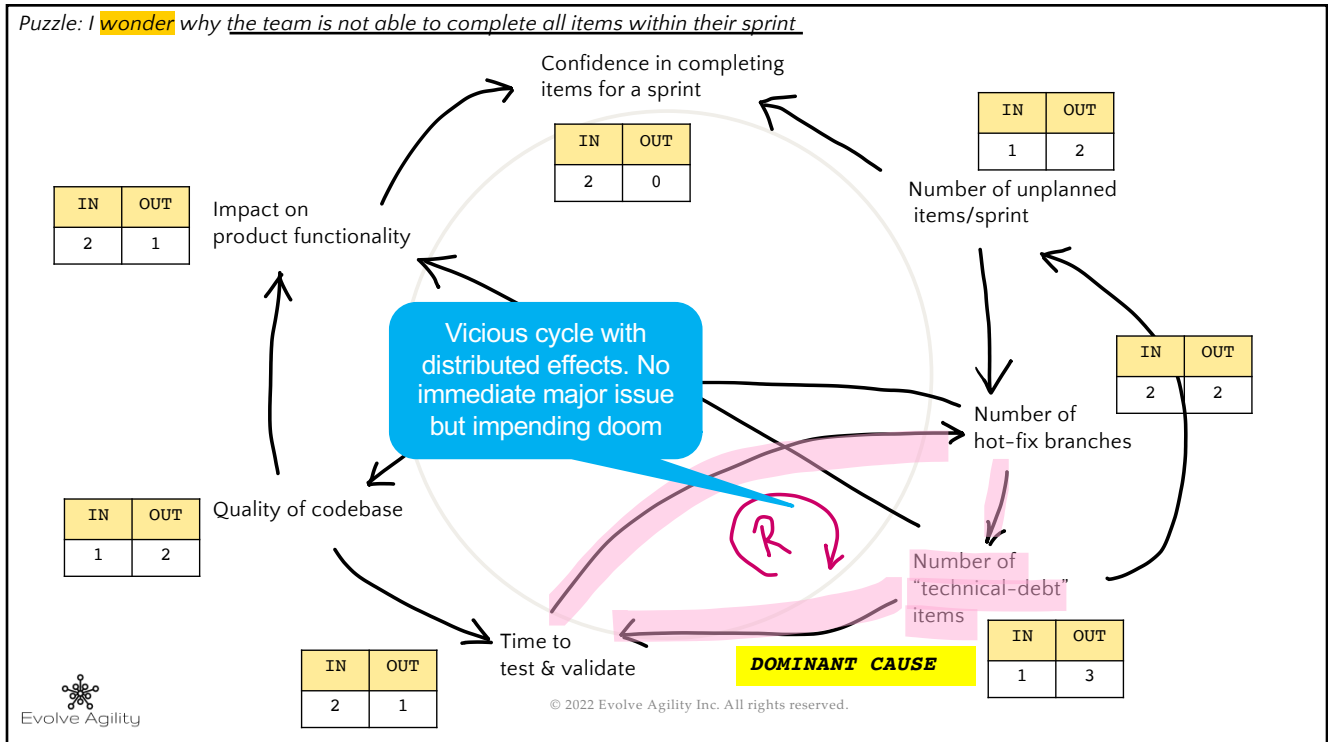
Reinforcing

The more you have the more you get.

- Snowball effect
- Compound Interest
- Growths or collapses
- Virtuous or vicious cycles

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34



35

Leverage

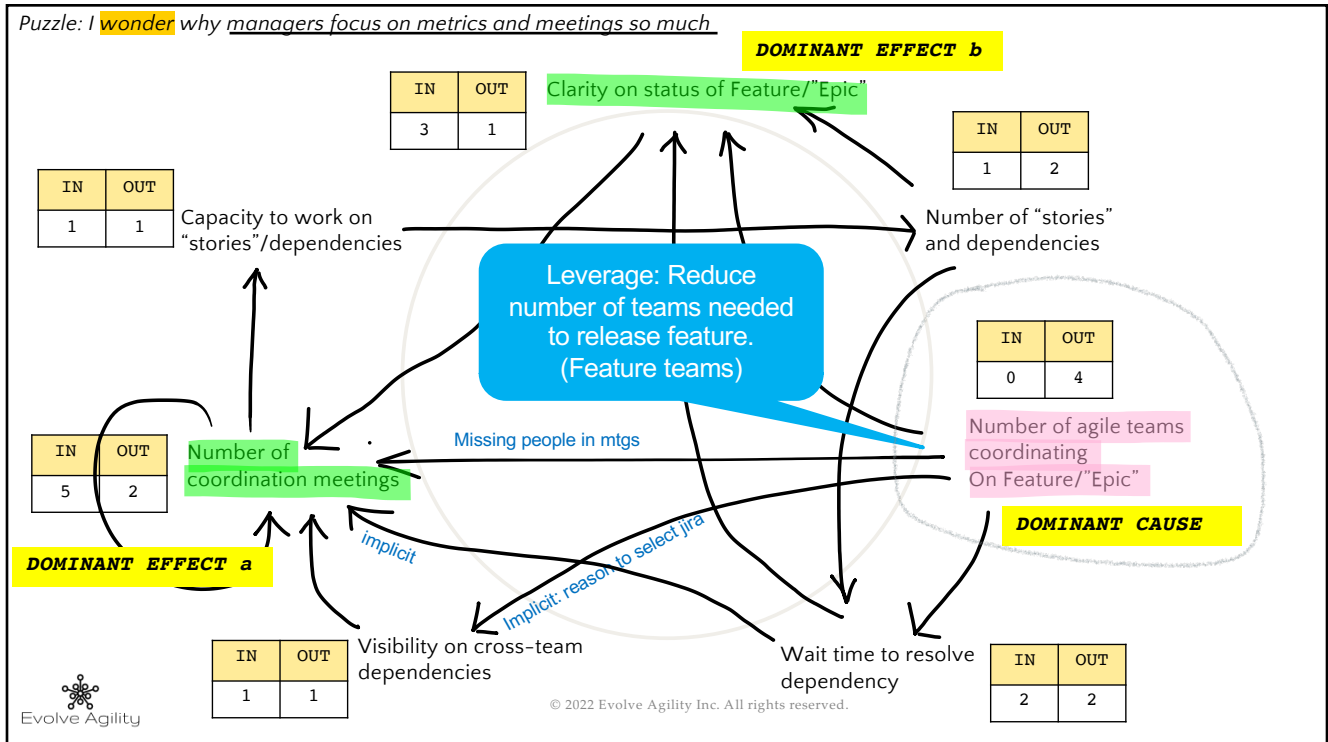
Small change in one thing leads to a large shift in the system

- Crowbar, Scissors, Spoon
- Prying out a nail, Opening a jar, home mortgage
- Impacts relationships between system parts

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36



37

We make the road by walking


“Every system is perfectly designed to get the results that it does.”

- W. Edwards Deming

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38



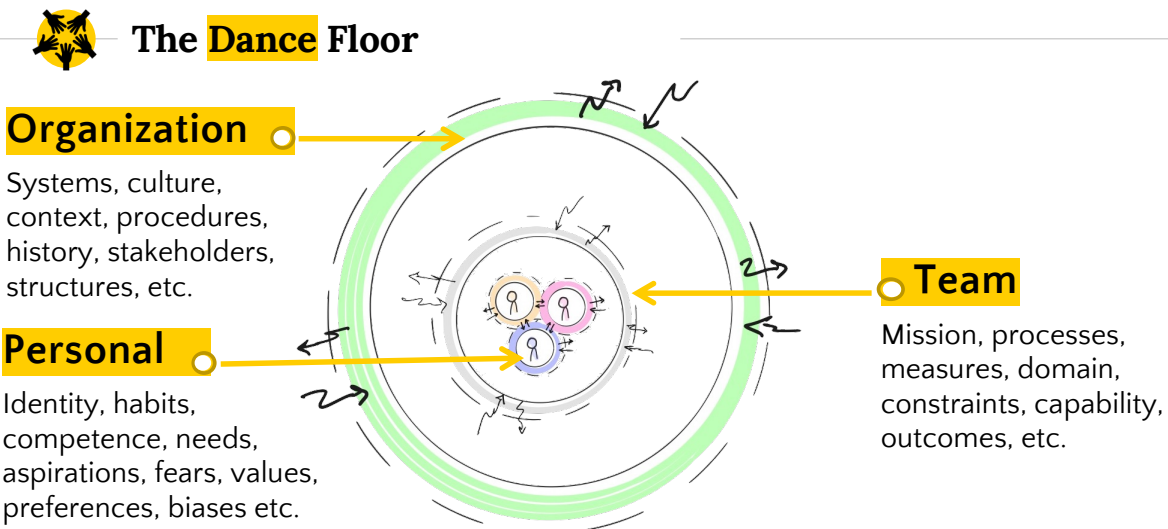
Pay Attention to the questions you ask

Practice going beyond event-oriented responses to look deeper into structural elements of problems.

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39



The Dance Floor

Organization
Systems, culture, context, procedures, history, stakeholders, structures, etc.


Personal
Identity, habits, competence, needs, aspirations, fears, values, preferences, biases etc.

Team
Mission, processes, measures, domain, constraints, capability, outcomes, etc.


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40




Enjoy the Dance



Leading within the organization context is a dance with many systems that have a will of their own.

Follow, Lead, Fool Around



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41



Sign up!

Any **questions** ?

 Dhaval.panchal@evolveagility.com

<https://signup.evolveagility.com/sign-me-up>



Talk **slides** & newsletter



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42

Reference Templates



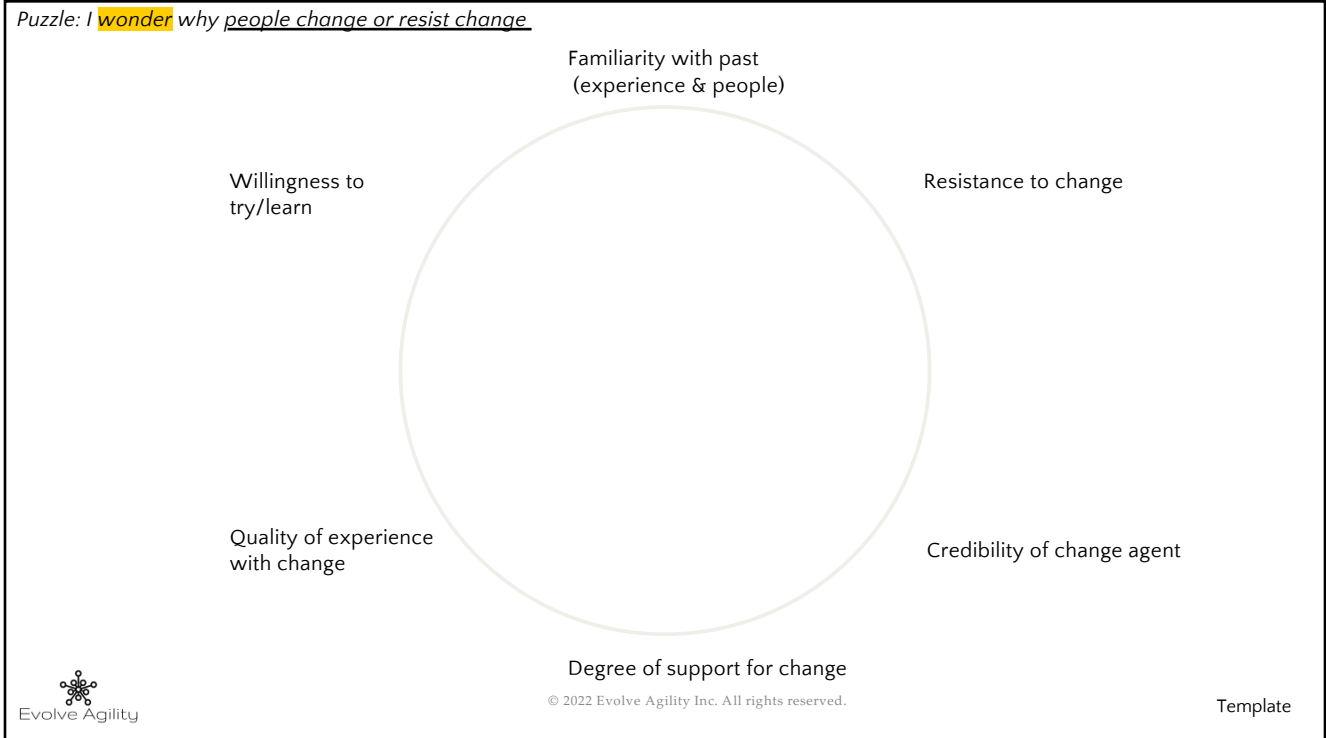
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Puzzle: I **wonder** why -----

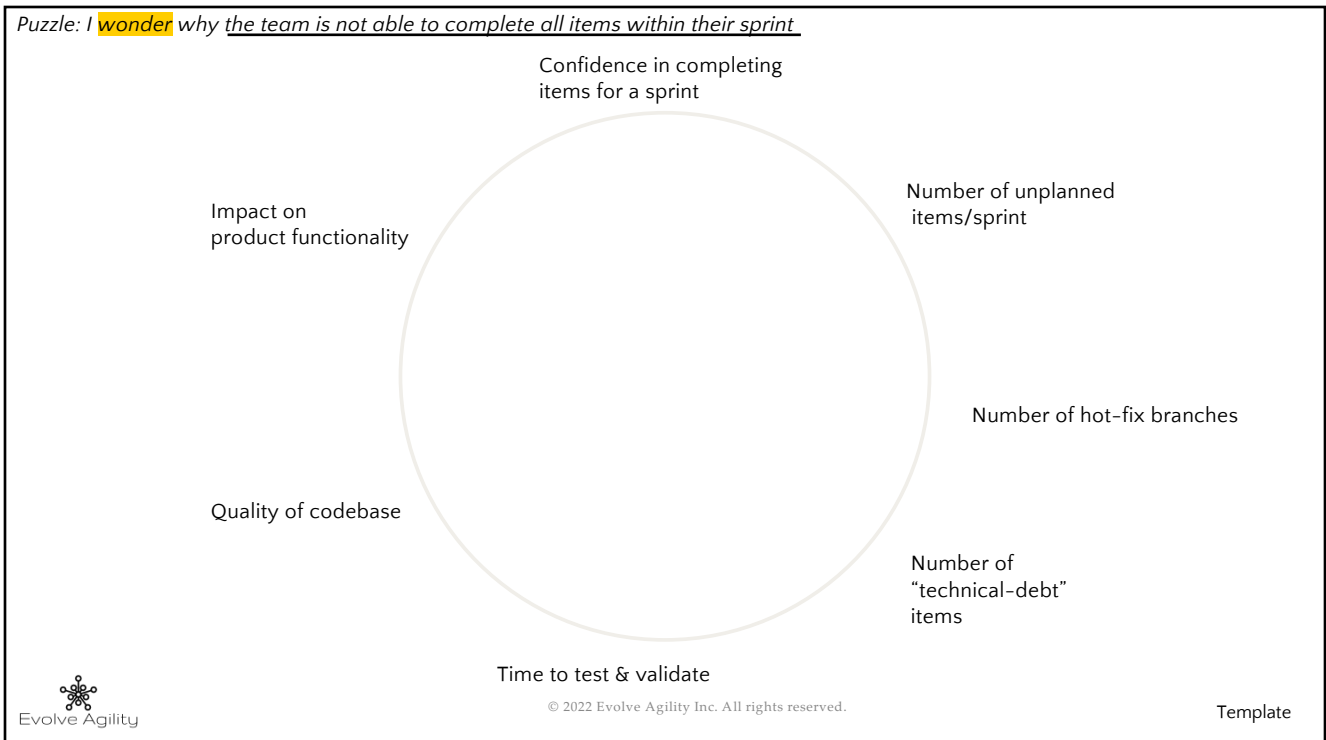


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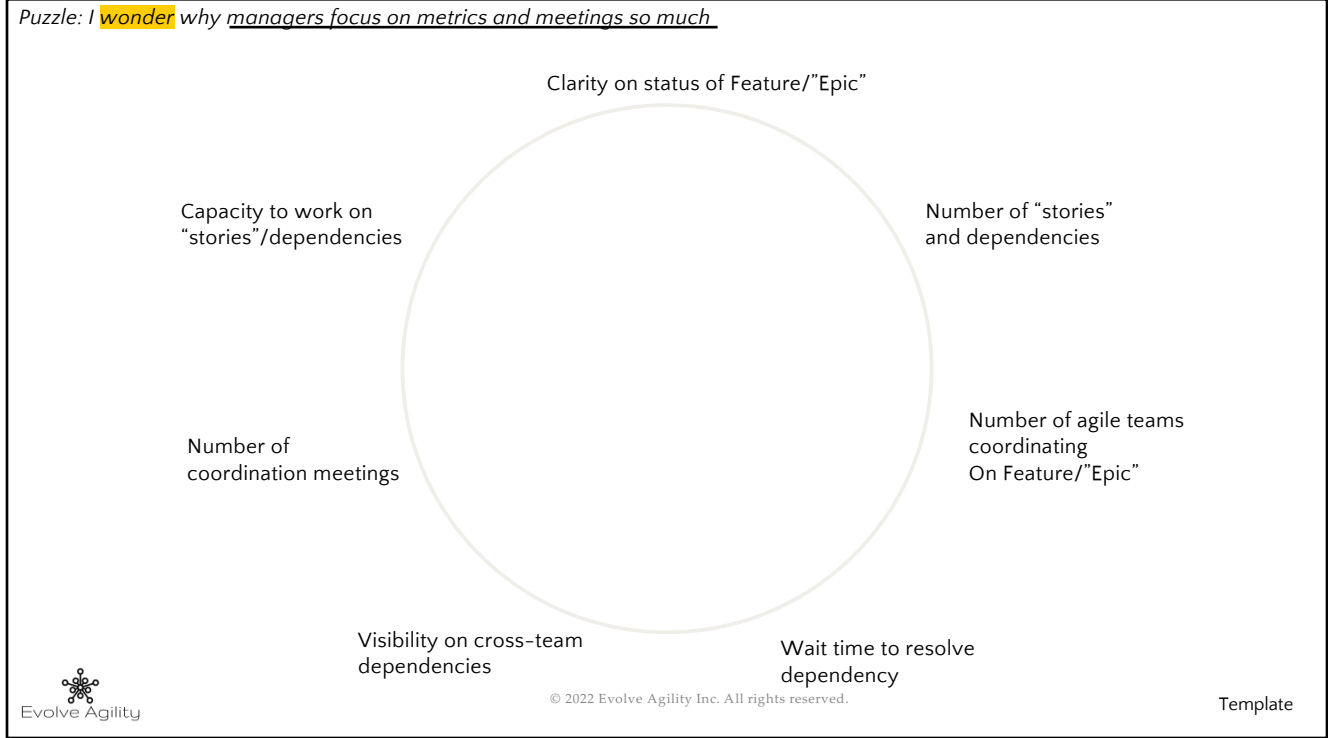
Template



45



46



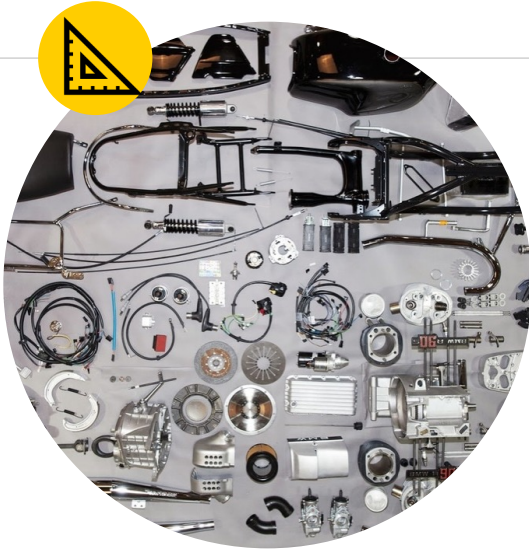
47

THE END

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48



Collection

Addition or removing of parts does not affect its functioning and relationships

System

Parts of the system must be present and arranged in a specific way to carry out the systems purpose.