

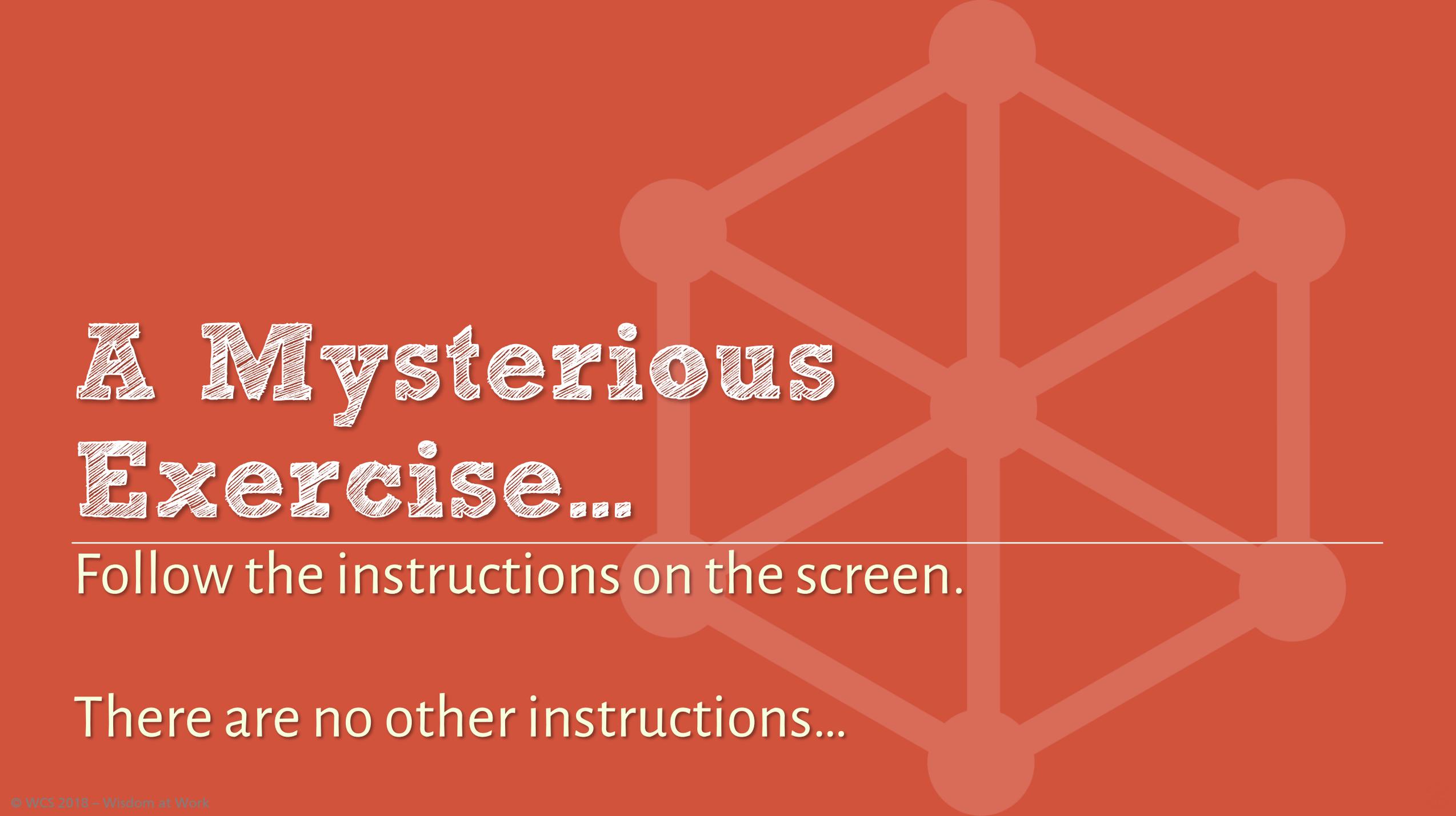


# MAKING SENSE...

---

...even when things don't make sense!





# A Mysterious Exercise...

---

Follow the instructions on the screen.

There are no other instructions...

# Step 1



Please arrange yourselves  
in order  
by  
HEIGHT



## Step 2



Please arrange yourselves  
by  
MONTH OF BIRTH



# Step 3



Please arrange yourselves  
by  
**PLACE OF ORIGIN**



## Step 4



Please arrange yourselves  
as if  
**YOU ARE 5-YEAR OLDS**  
**AT A PARTY...**  
... you've just drunk a Red Bull!

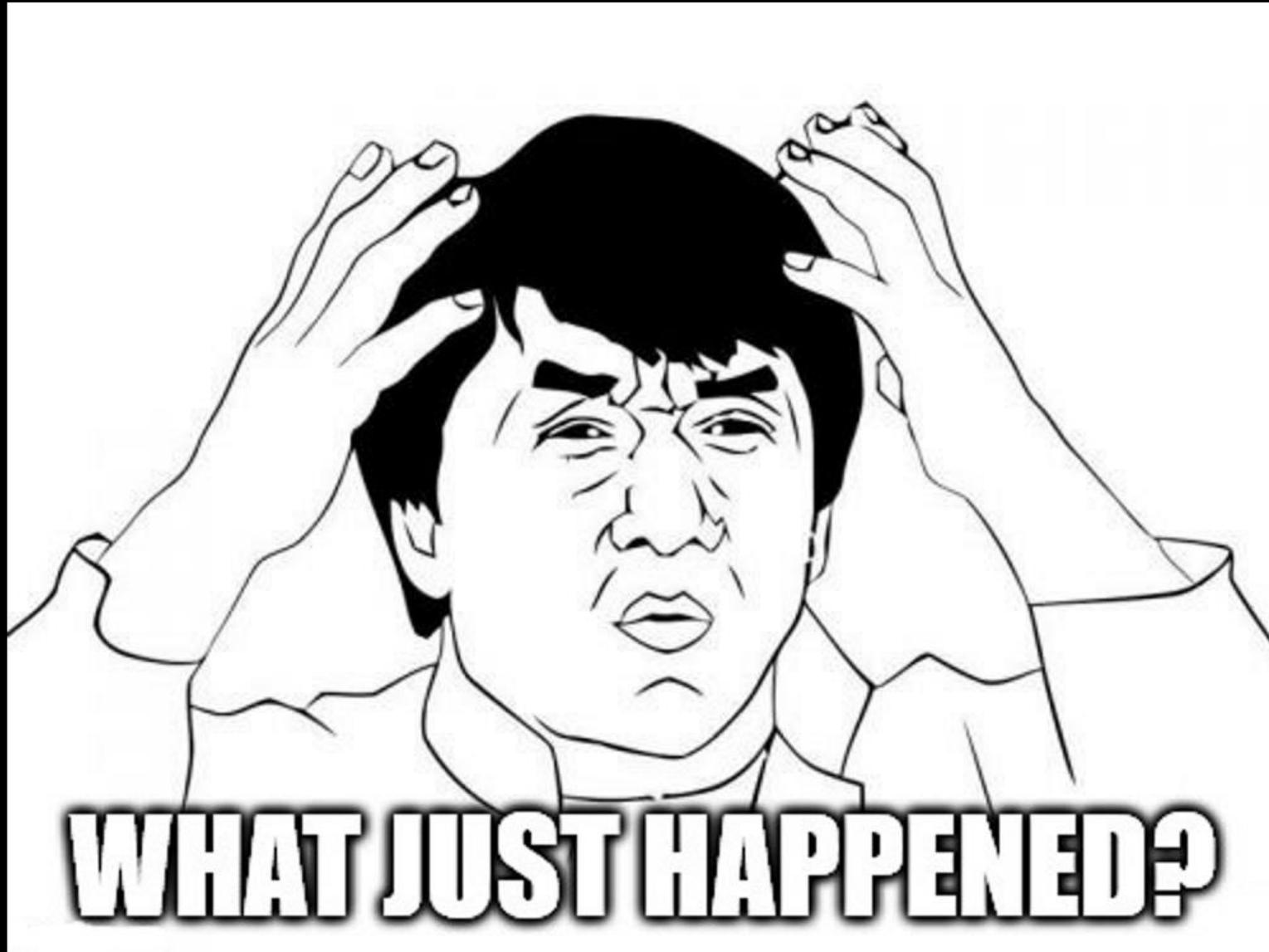


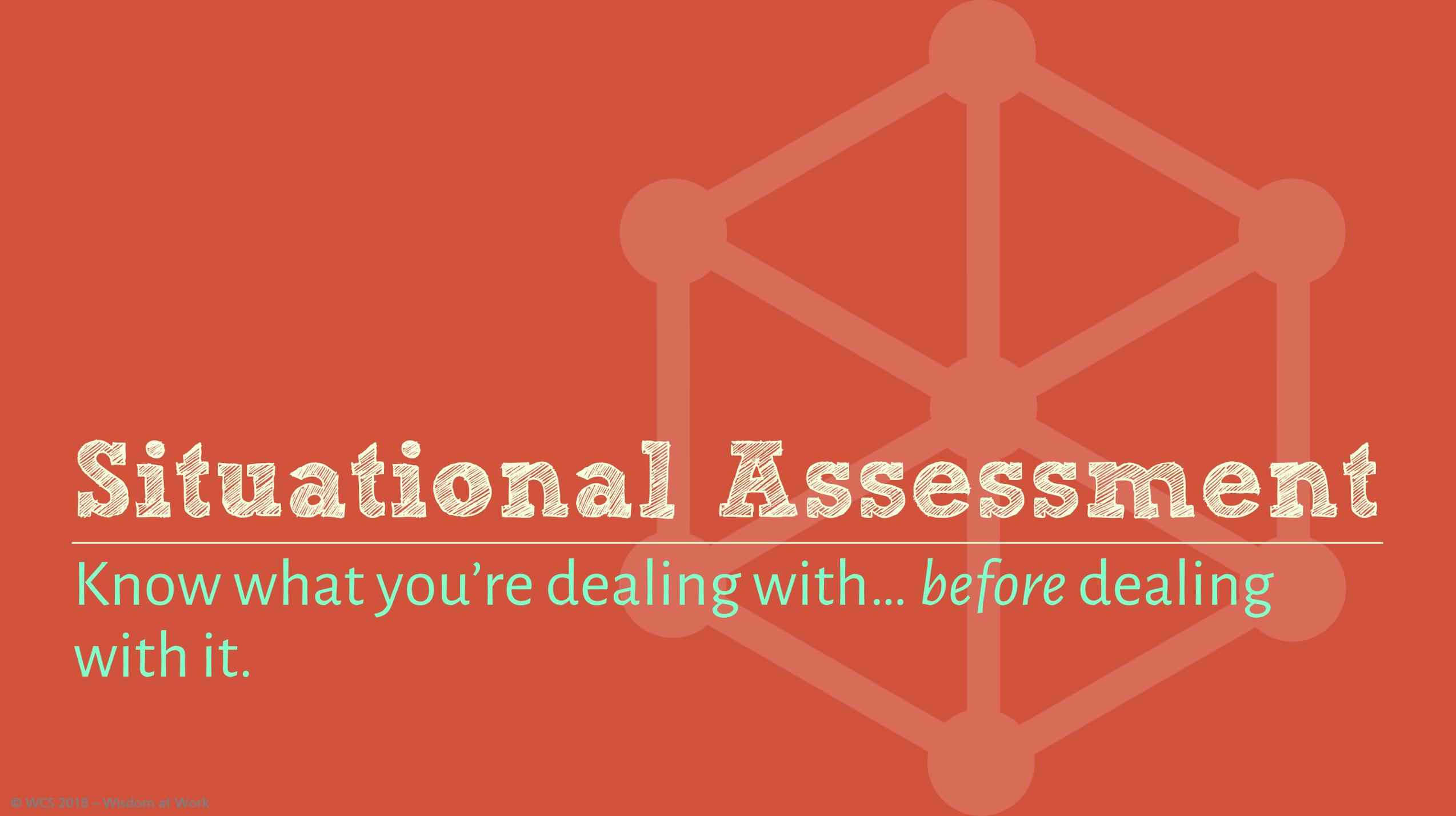
# Step 5



Please arrange yourself  
by  
NUMBER OF BACTERIA  
IN YOUR GUT







# Situational Assessment

---

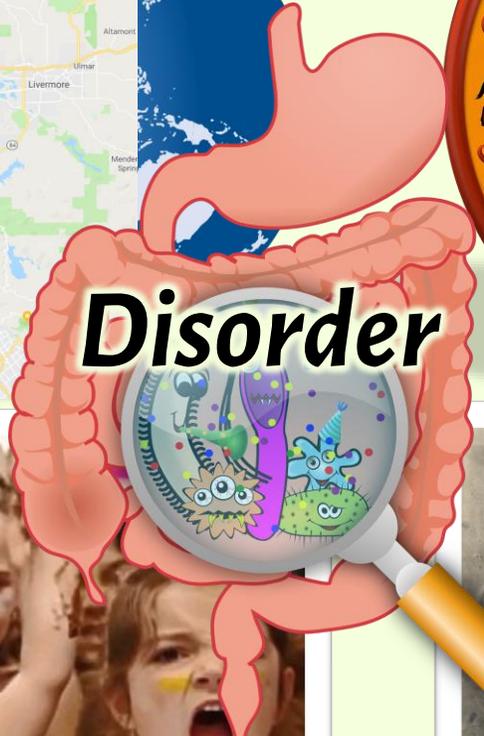
Know what you're dealing with... *before* dealing with it.



**Complex**



**Complicated**



**Disorder**



**Chaotic**



**Obvious**



***Complex***

probe-sense-respond

***Complicated***

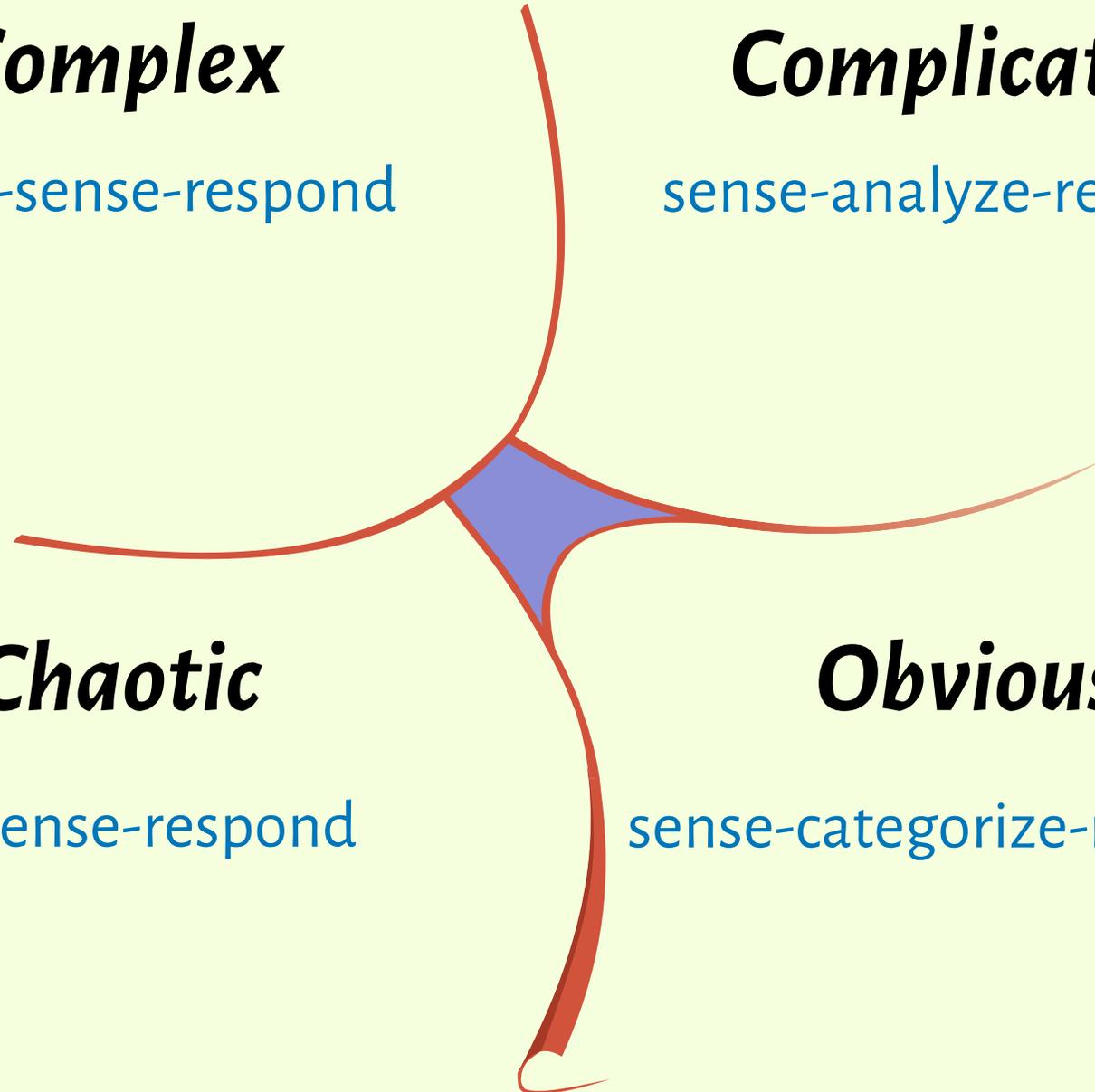
sense-analyze-respond

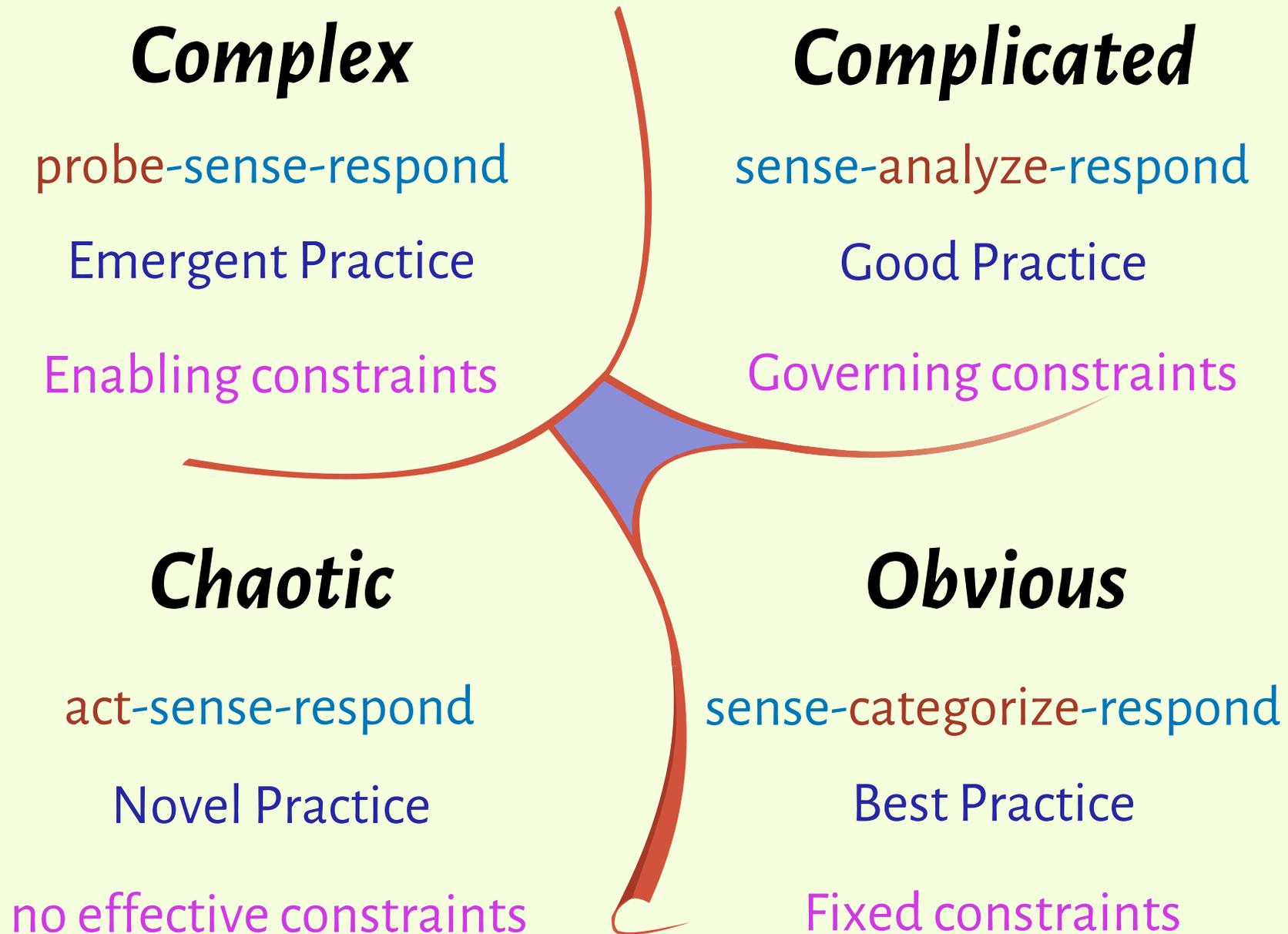
***Chaotic***

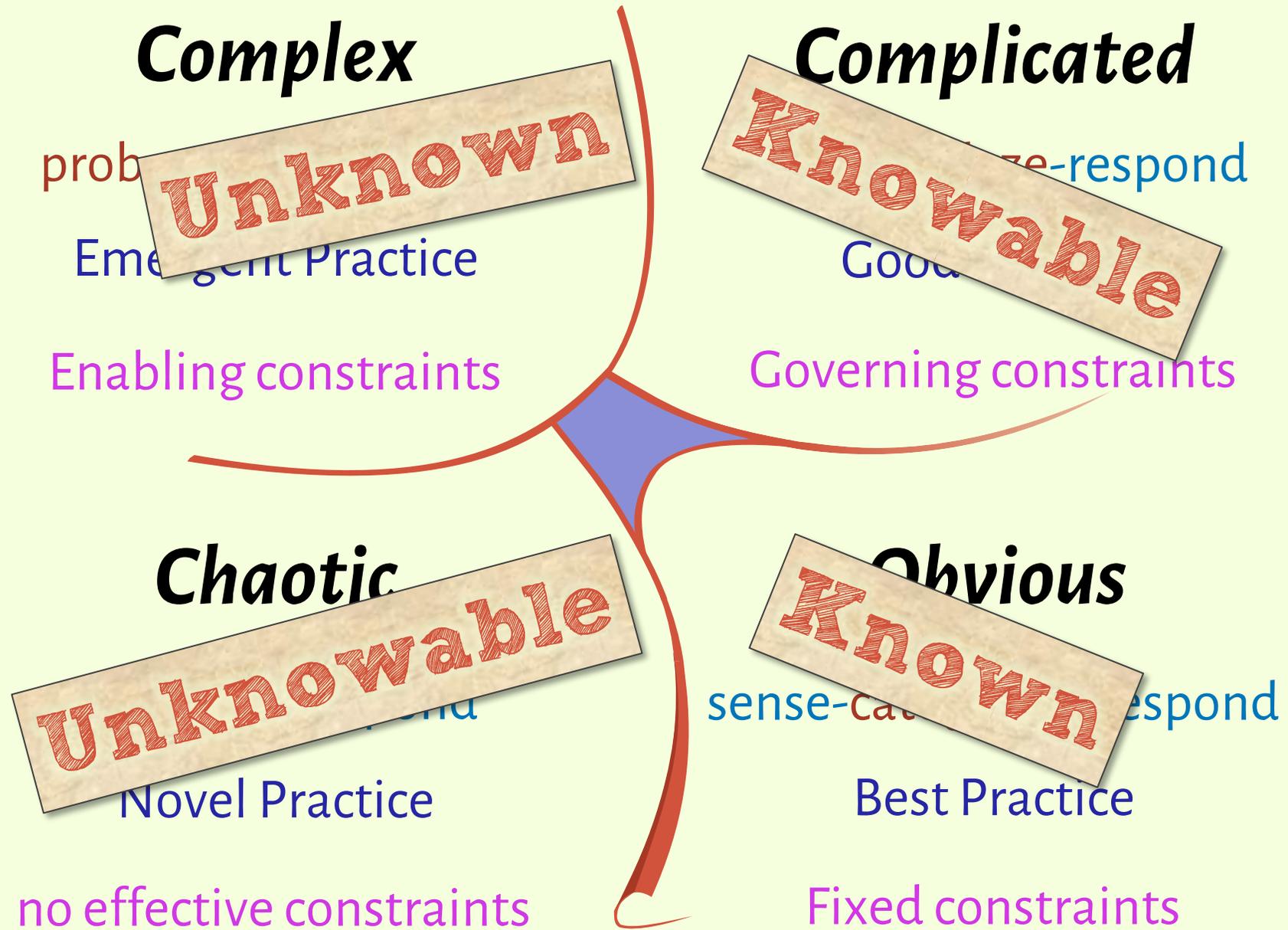
act-sense-respond

***Obvious***

sense-categorize-respond







**Complex**

**Unknown**

prob  
Emergent Practice  
Enabling constraints

**Complicated**

**Knowable**

Good size-respond  
Governing constraints

**Chaotic**

**Unknowable**

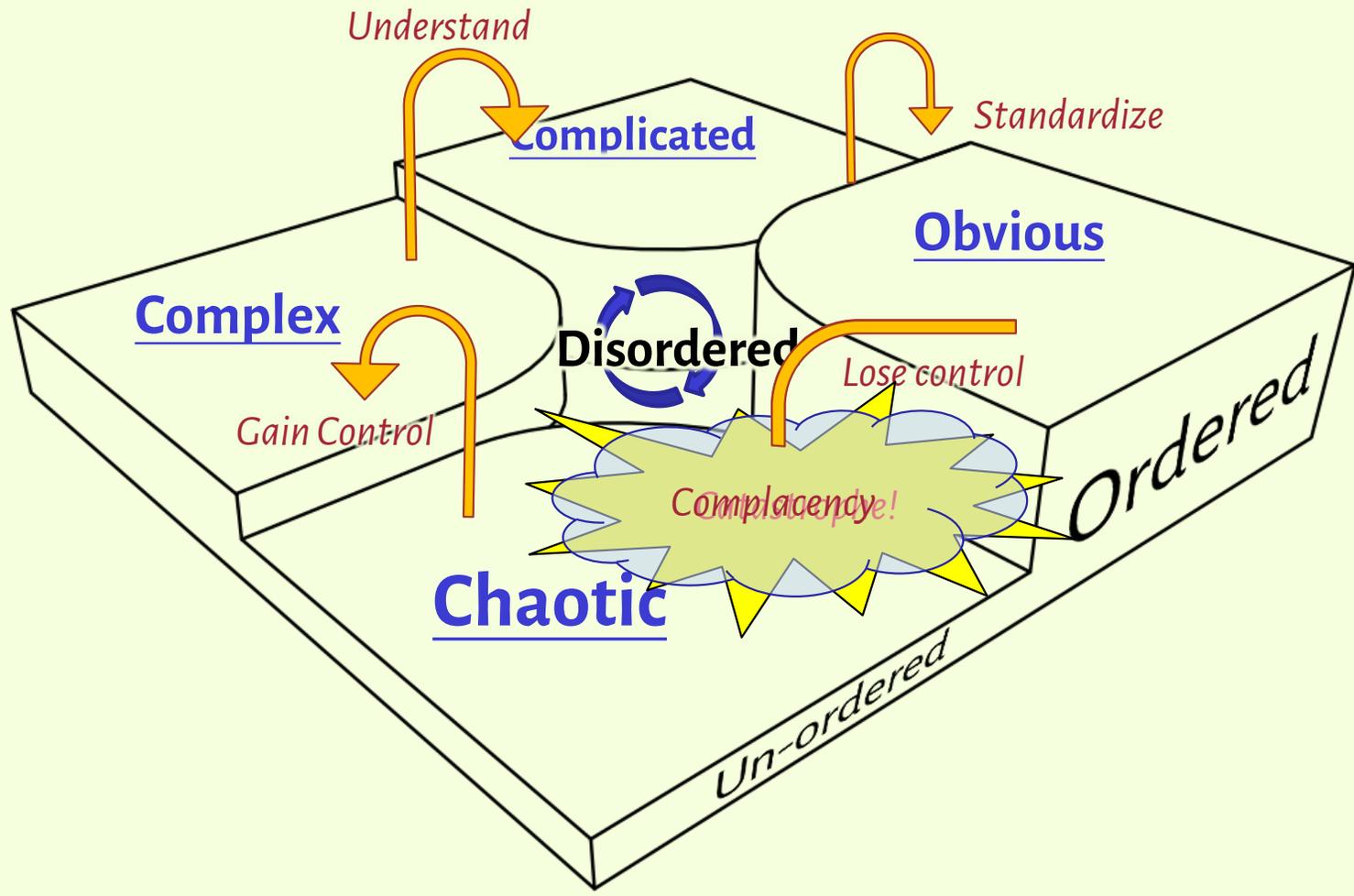
Novel Practice  
no effective constraints

**Obvious**

**Known**

sense-cat respond  
Best Practice  
Fixed constraints





# ***Complex***

probe-sense-respond

Emergent Practice

Enabling constraints

## **Un-Ordered**

# ***Chaotic***

act-sense-respond

Novel Practice

no effective constraints

# ***Complicated***

sense-analyze-respond

Good Practice

Governing constraints

## **Ordered**

# ***Obvious***

sense-categorize-respond

Best Practice

Fixed constraints



**Unordered**

**Ordered**



# **Complex**

probe-sense-respond

Emergent Practice

Enabling constraints

# **Complicated**

sense-analyze-respond

Good Practice

Governing constraints

# **Chaotic**

**Chaotic** act-sense-respond

Novel Practice

no effective constraints

# **Obvious**

sense-categorize-respond

Best Practice

Fixed constraints

# **Ordered**



# Cynefin

## Sense-making

### Framework

Practice

Best I

no effective constraints

Fixed constraints



## Situational Assessment

Know what you're dealing with... *before* dealing with it.

## Complex Adaptive Systems

How can you tell if you're dealing with one?

## What to do?

Getting started on applying Cynefin

## A recent, local example

"But how can you use this...?"

## Questions?

What questions do you have... that I can answer in the time we've got?

## Let's wrap it up

Recap and reminder

## Cynefin Dynamics

Moving between the domains

## Complex Facilitation Techniques

Emergence can be your friend!

## Sense-Maker®

Revealing deep institutional knowledge

## Cynefin Training

Paying it forward

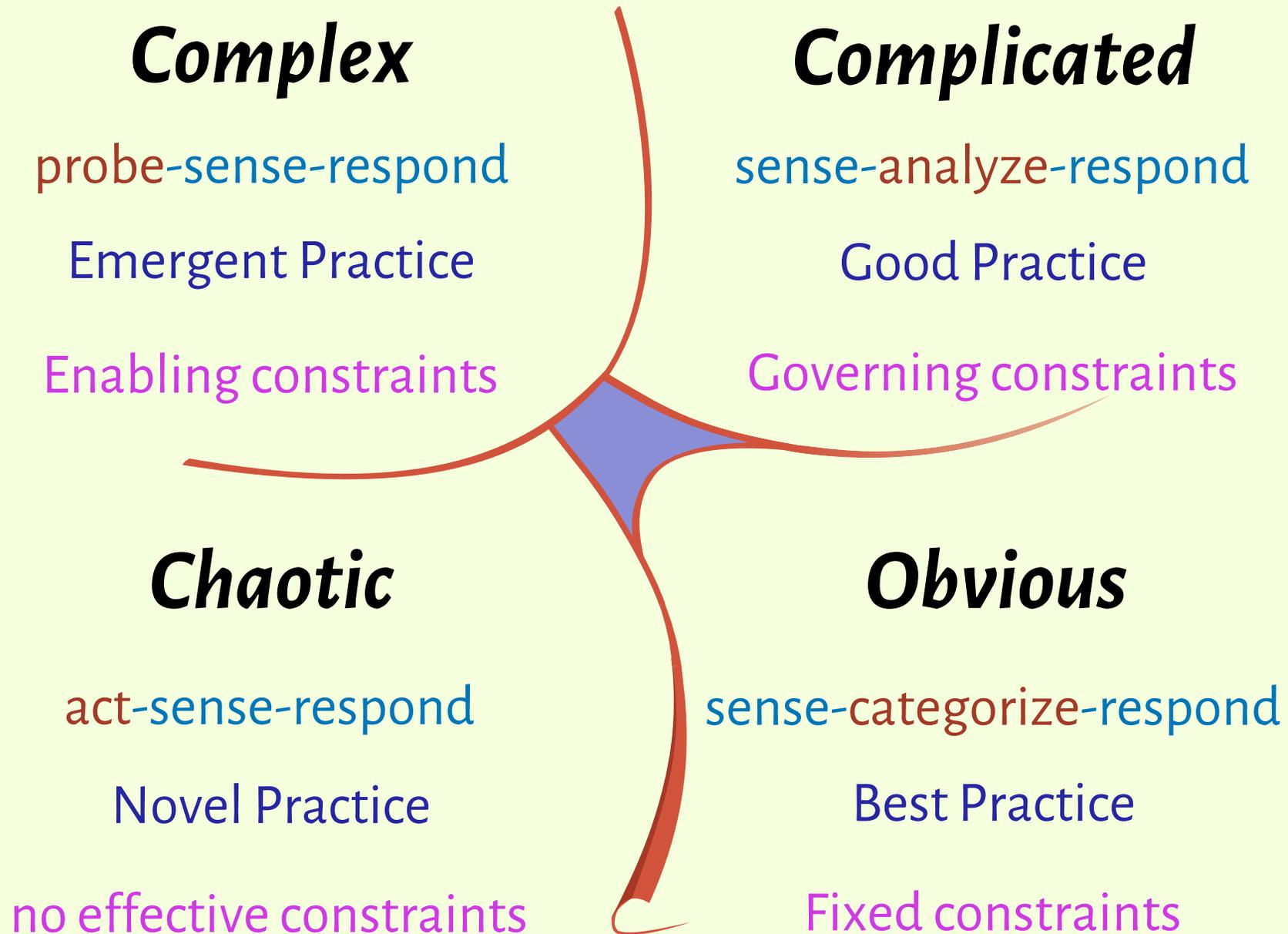


# Complex Adaptive Systems

---

How can you tell if you're dealing with one?





# 7 Characteristics of a Complex Adaptive System

- Unintended Consequences
- Highly sensitive to small changes
- Not causal
- Propensities
- Not a sum of its parts
- Serendipity
- Perpetual novelty





TOLL PLAZA AHEAD  
1.000 MILES PER HOUR FINE  
ENFORCED BY VIDEO

4999 MILES  
FREE PARKING  
RESTROOMS

AUTO TOLL KING FEE  
MICHIGAN 1.000 SE  
MICHIGAN 84  
MICHIGAN 85

NOVOLA

# 7 Characteristics of a Complex Adaptive System

- Unintended Consequences
- Highly sensitive to small changes
- Dispositional, not causal
- Propensities
- Not a sum of its parts
- Serendipity
- Perpetual novelty





VIA 9GAG.COM



# 7 Characteristics of a Complex Adaptive System

- Unintended Consequences
- Highly sensitive to small changes
- **Not causal**
- Propensities
- Not a sum of its parts
- Serendipity
- Perpetual novelty



~~$a + b = c$~~

**Dispositional**

$c \parallel d \parallel e :: a + b$

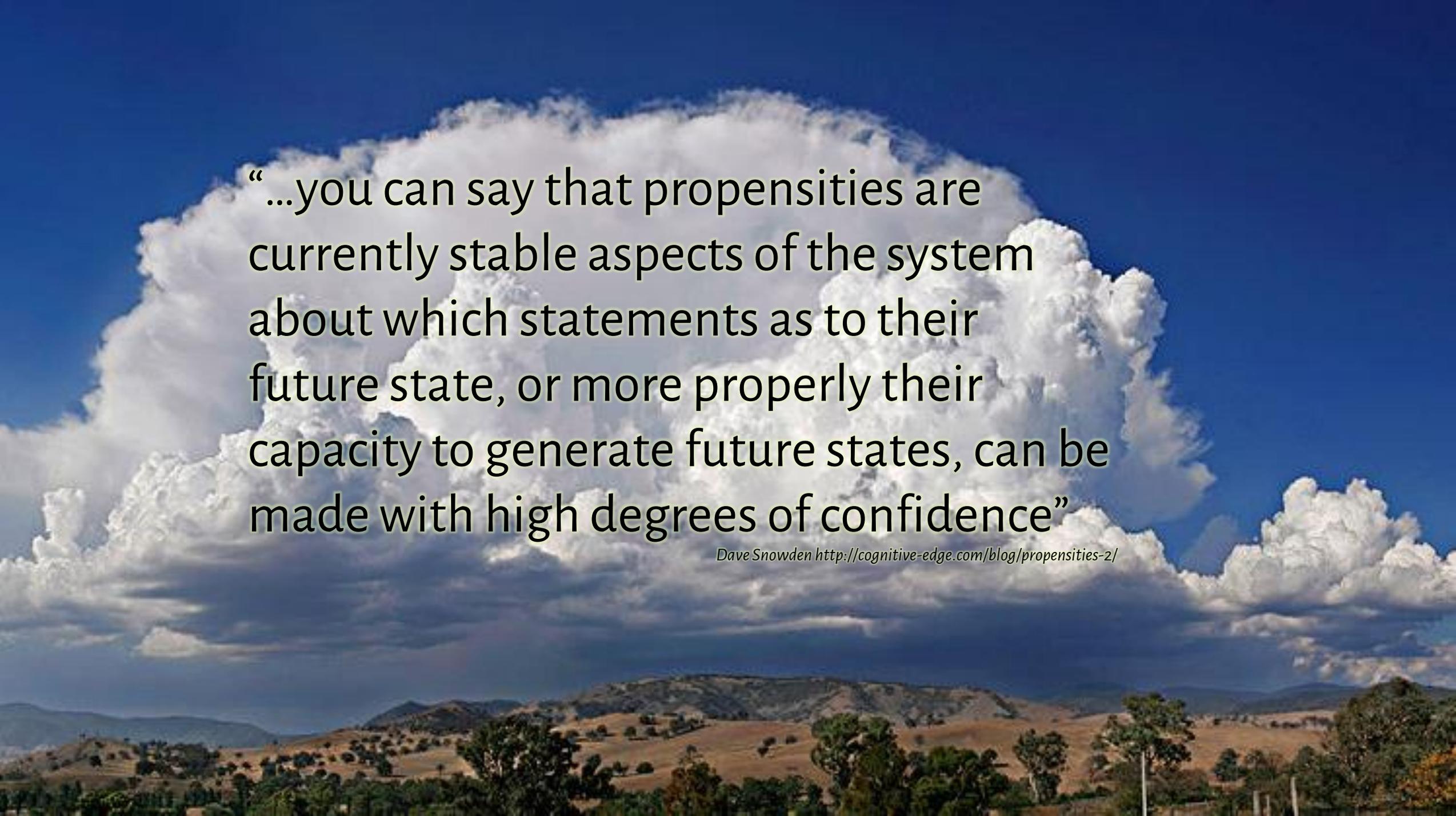
$f \nparallel \dots \nparallel n :: a + b$  ?



# 7 Characteristics of a Complex Adaptive System

- Unintended Consequences
- Highly sensitive to small changes
- Not causal
- **Propensities**
- Not a sum of its parts
- Serendipity
- Perpetual novelty



A landscape photograph showing rolling hills in the foreground and middle ground, with a large, fluffy white cumulus cloud dominating the upper half of the frame against a clear blue sky. The hills are covered in sparse vegetation, including small trees and shrubs. The overall scene is bright and clear.

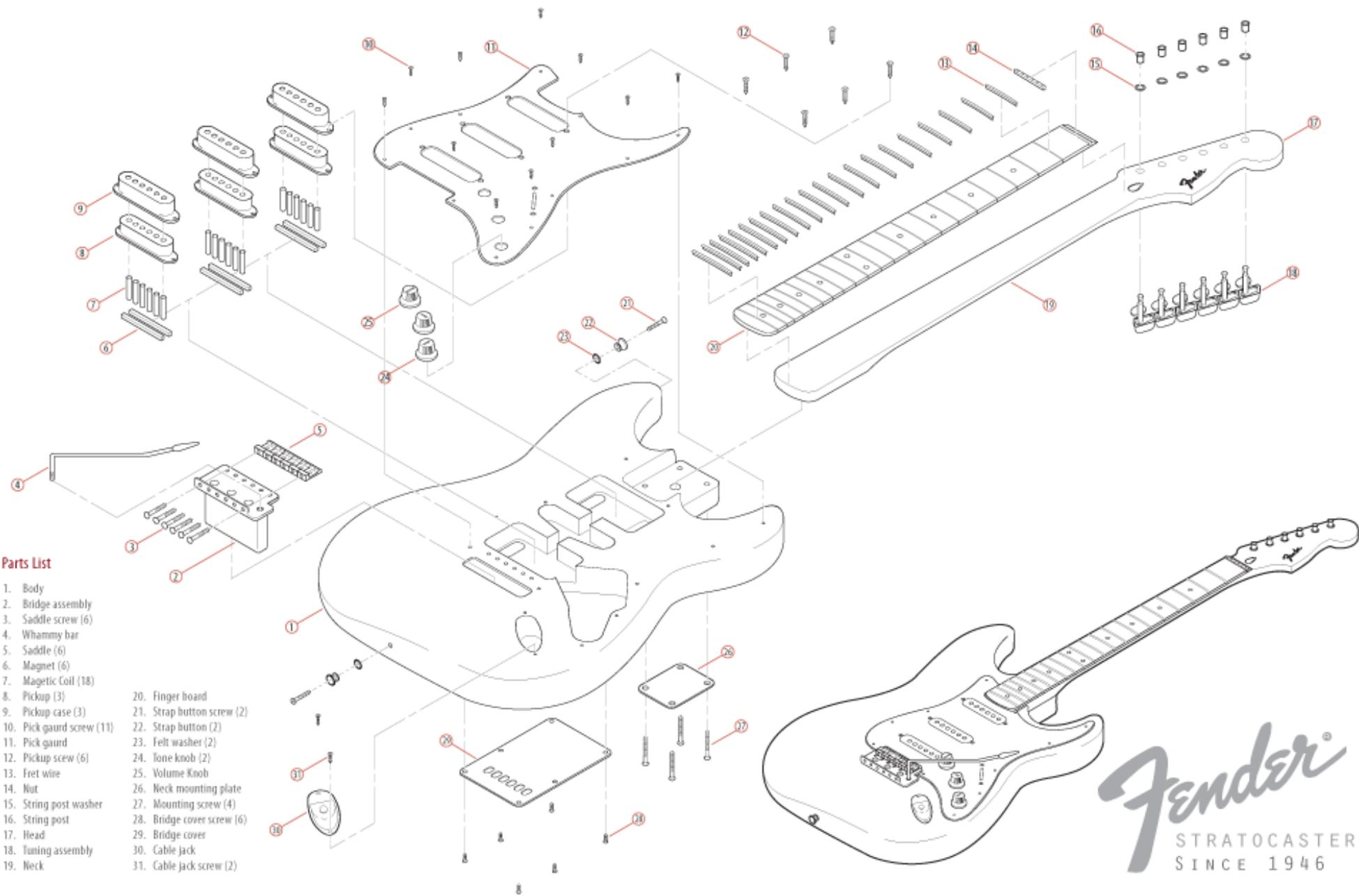
“...you can say that propensities are currently stable aspects of the system about which statements as to their future state, or more properly their capacity to generate future states, can be made with high degrees of confidence”

*Dave Snowden <http://cognitive-edge.com/blog/propensities-2/>*

# 7 Characteristics of a Complex Adaptive System

- Unintended Consequences
- Highly sensitive to small changes
- Not causal
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- Serendipity
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**Parts List**

- 1. Body
- 2. Bridge assembly
- 3. Saddle screw (6)
- 4. Whammy bar
- 5. Saddle (6)
- 6. Magnet (6)
- 7. Magnetic Coil (18)
- 8. Pickup (3)
- 9. Pickup case (3)
- 10. Pick guard screw (11)
- 11. Pick guard
- 12. Pickup screw (6)
- 13. Fret wire
- 14. Nut
- 15. String post washer
- 16. String post
- 17. Head
- 18. Tuning assembly
- 19. Neck
- 20. Finger board
- 21. Strap button screw (2)
- 22. Strap button (2)
- 23. Felt washer (2)
- 24. Tone knob (2)
- 25. Volume Knob
- 26. Neck mounting plate
- 27. Mounting screw (4)
- 28. Bridge cover screw (6)
- 29. Bridge cover
- 30. Cable jack
- 31. Cable jack screw (2)

**Fender**  
 STRATOCASTER  
 SINCE 1946



# 7 Characteristics of a Complex Adaptive System

- Unintended Consequences
- Highly sensitive to small changes
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- Perpetual novelty





DIRECTIONS  
FOR MAKING FUN WITH  
**Slinky**

Hold the Slinky on the top loop if you start, then let one end  
fall to the ground. We let both sit on the outside of the next  
loop. The Slinky will then "walk down" its stairs, step by  
step, until it reaches the ground. (Fig. 1)

Hold the Slinky in your hands as shown in Fig. 2. First move  
one end up and down. The next, your left, raise the other  
end. The Slinky will "walk up" its stairs. See how Slinky moves as  
you move your hands. (Fig. 2)

Hold the Slinky in your hands as shown in Fig. 3. First move  
one end up and down. The next, your right, raise the other  
end. The Slinky will "walk up" its stairs. See how Slinky moves as  
you move your hands. (Fig. 3)



*Slinky*

PATENT PENDING

# 7 Characteristics of a Complex Adaptive System

- Unintended Consequences
- Highly sensitive to small changes
- Not causal
- Propensities
- Not a sum of its parts
- Serendipity
- Perpetual novelty



**Pay close  
attention...**

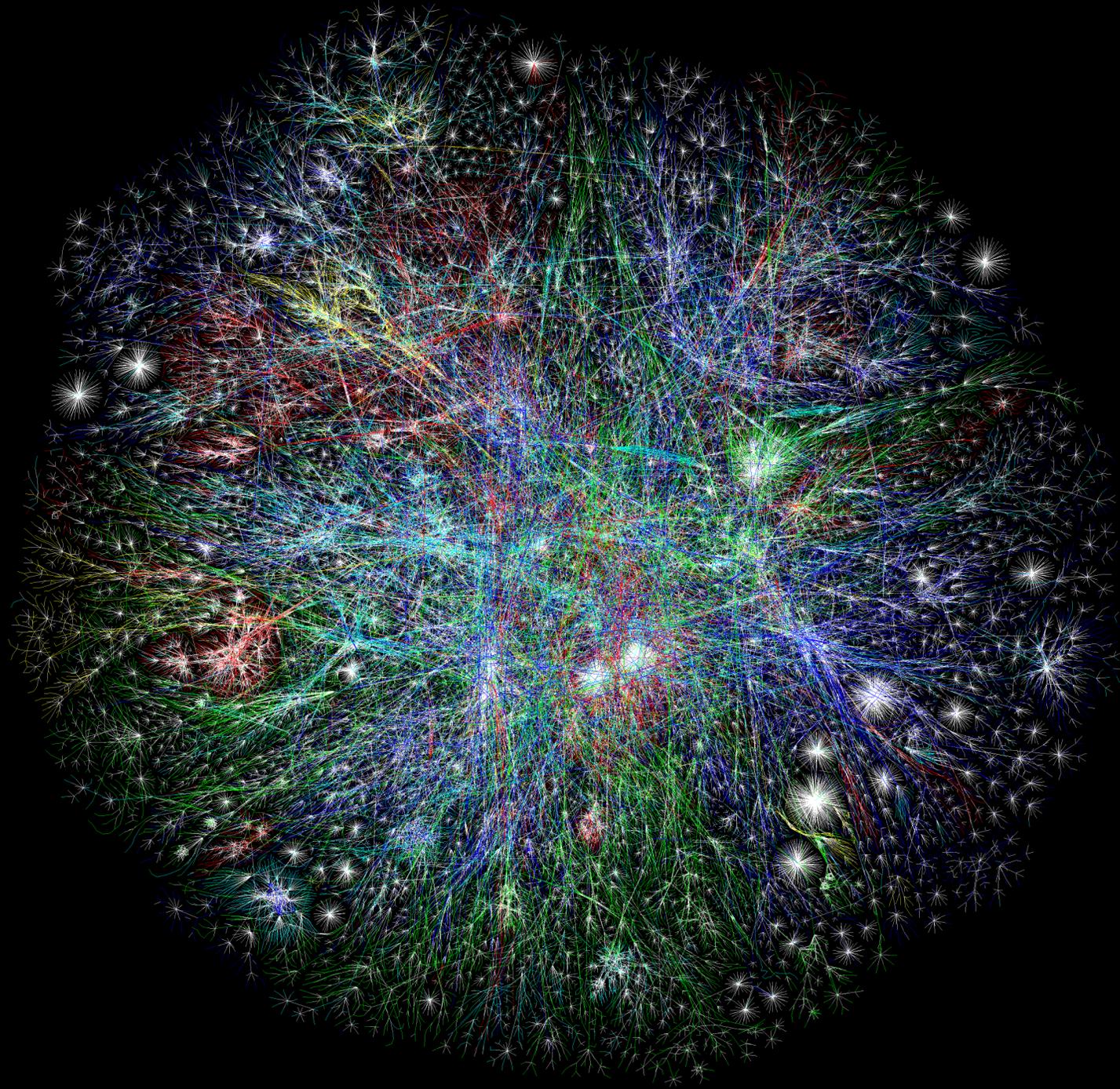




# 7 Characteristics of a Complex Adaptive System

- Unintended Consequences
- Highly sensitive to small changes
- Not causal
- Propensities
- Not a sum of its parts
- Serendipity
- Perpetual novelty





## Situational Assessment

Know what you're dealing with... *before* dealing with it.

## Complex Adaptive Systems

How can you tell if you're dealing with one?

## What to do?

Getting started on applying Cynefin

## A recent, local example

"But how can you use this...?"

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What questions do you have... that I can answer in the time we've got?

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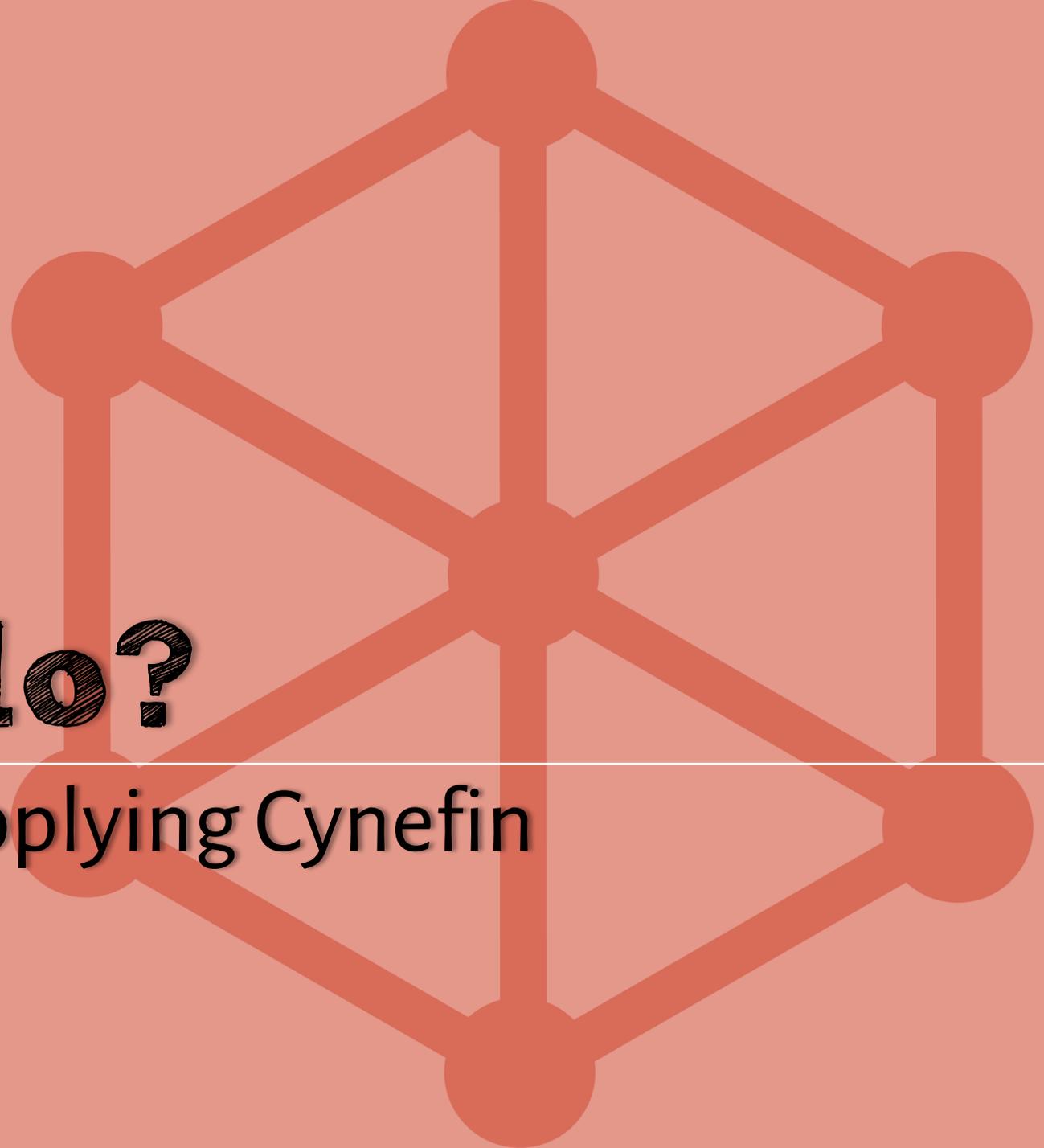
## Cynefin Training

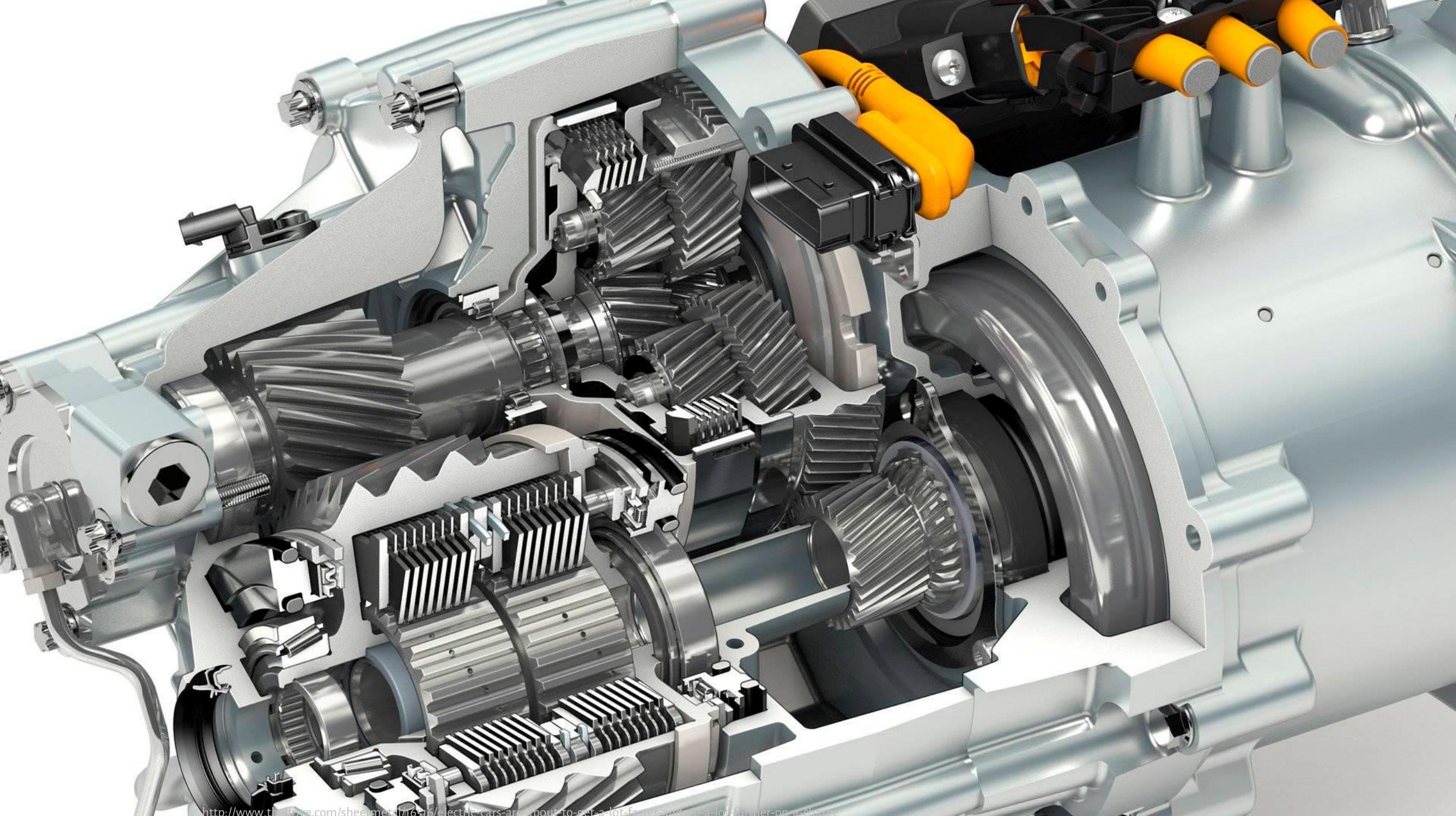
Paying it forward

# What to do?

---

Getting started on applying Cynefin





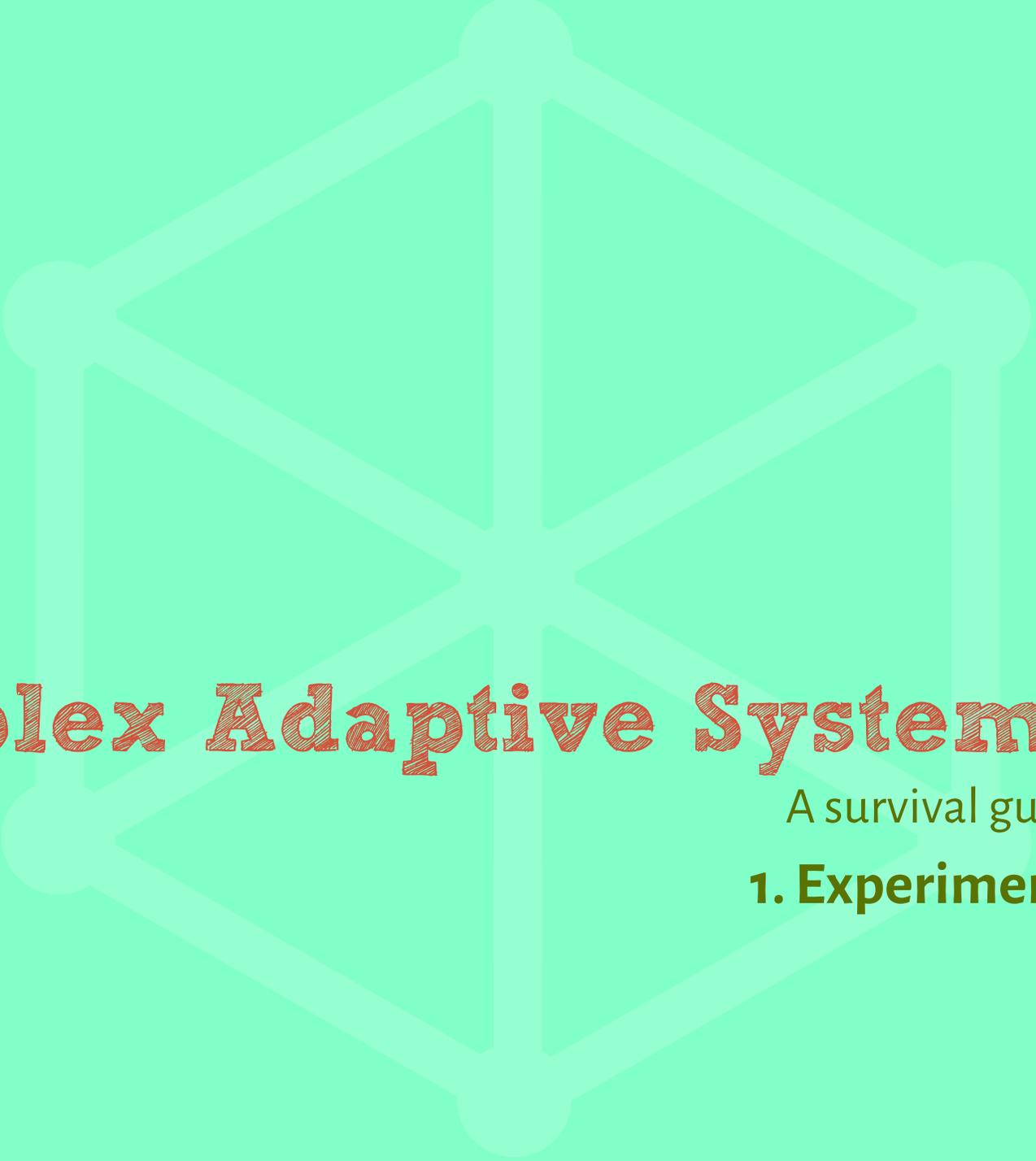




# Constraints & Complexity – the moving parts

1. ORDERED - system constrains the parts
2. CHAOTIC - system has no effective constraints
3. COMPLEX - system lightly constrains parts but as parts interact within the system they modify the system.





# Complex Adaptive Systems

A survival guide

## 1. Experiments

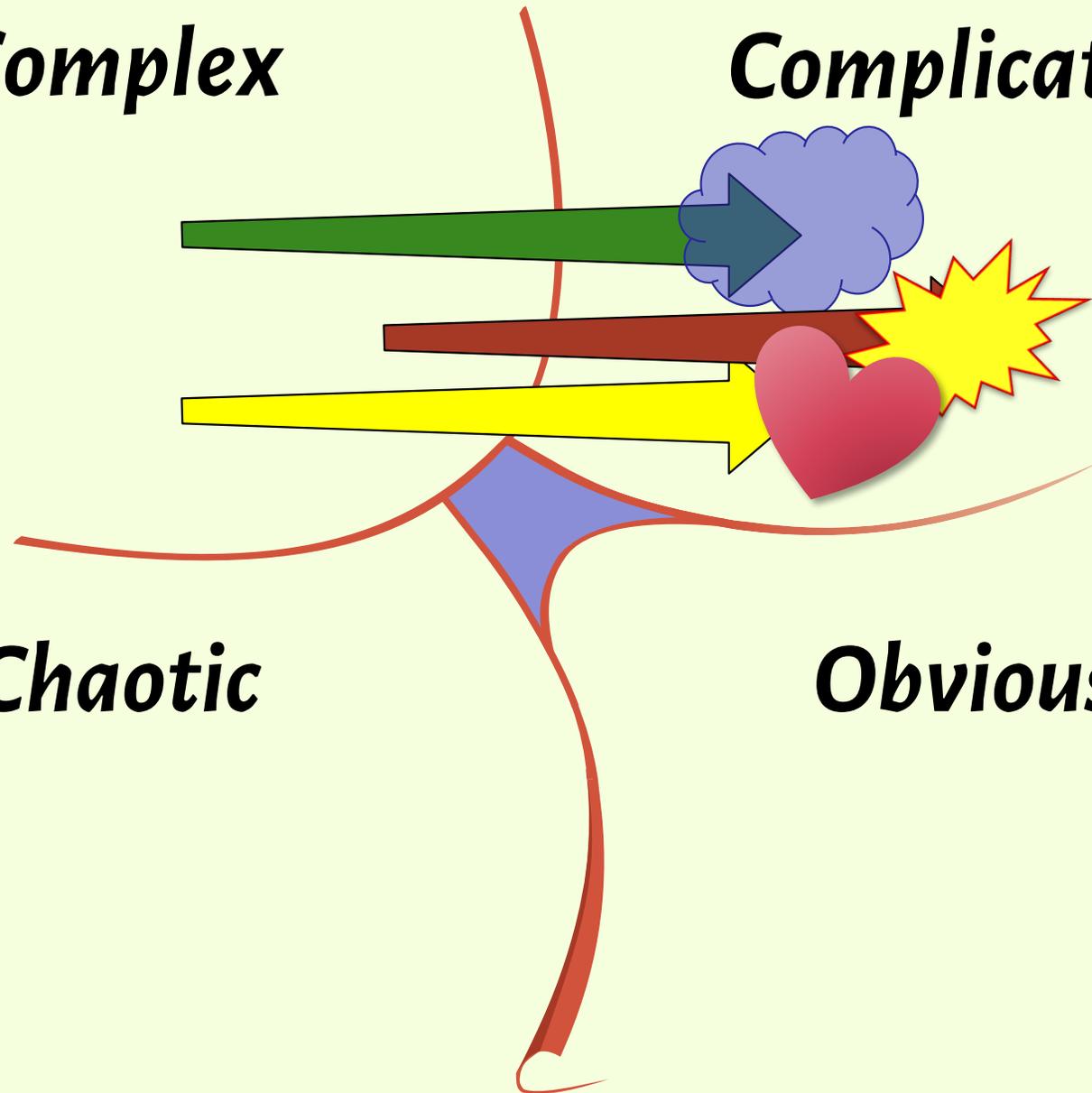


***Complex***

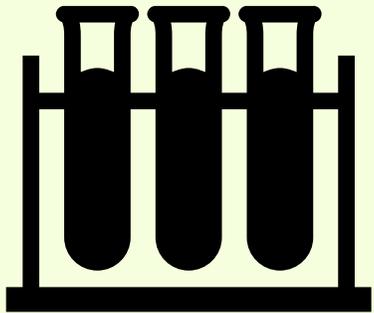
***Complicated***

***Chaotic***

***Obvious***



# What is a “safe-to-fail” experiment?



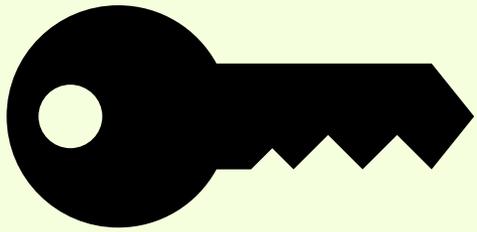
1. What can we **change**?
2. Of the things we can change, where can we **monitor** the impact of change?
3. Where we can monitor the impact, can we rapidly **amplify success or recover from failure**?







# Most essential...



- Real time feedback loops

*We are uncovering better ways...*





# Complex Adaptive Systems

A survival guide

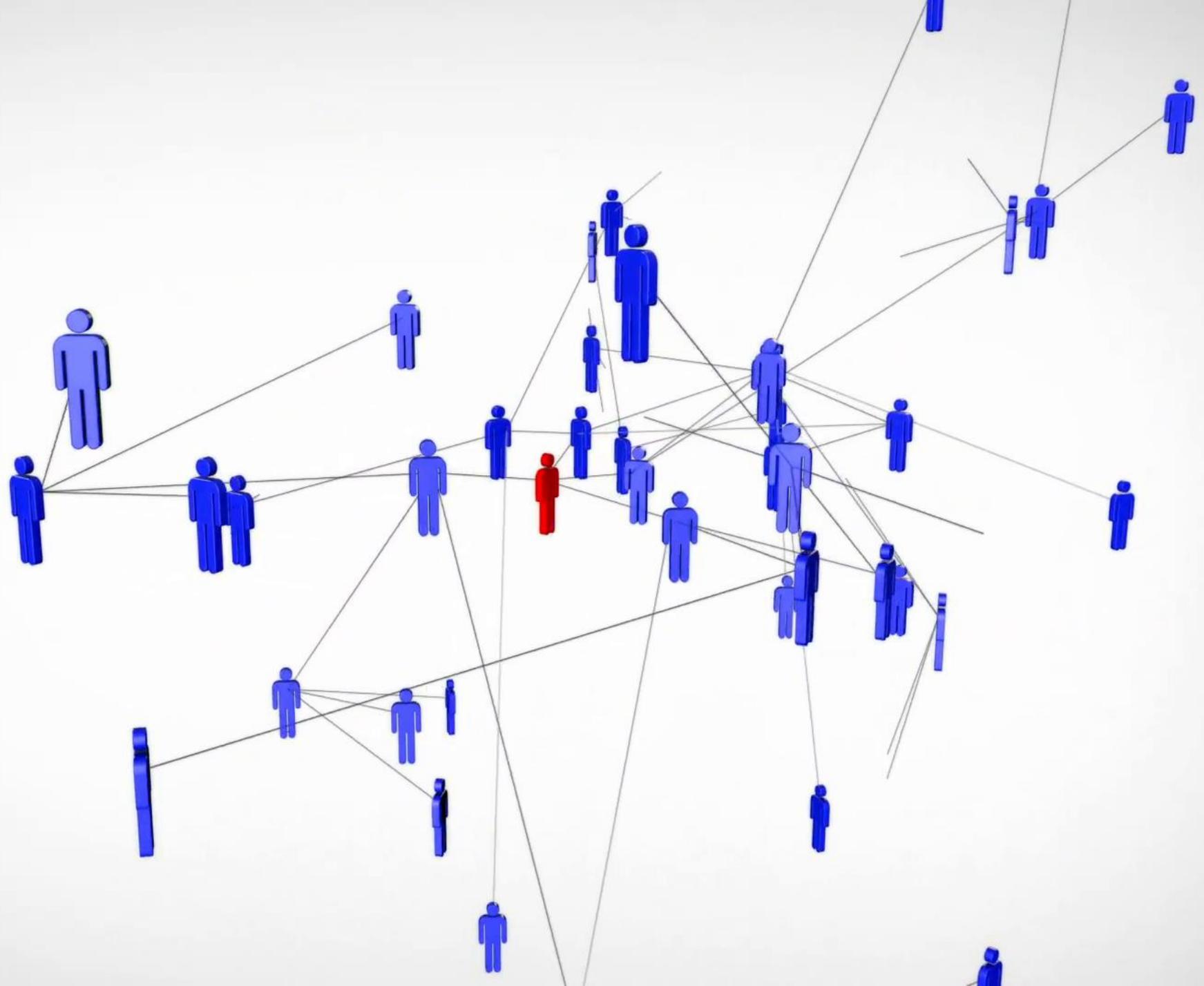
## 2. Tools



| PROJECTS  | ID    | Program       | Start Date   | End Date     | Owner             |                           |             |
|---|-------|---------------|--------------|--------------|-------------------|---------------------------|-------------|
| TargetProcess2  | 93844 | TargetProcess | Jan 27, 2012 | Apr 2, 2015  | [Avatar]          |                           |             |
| TP3   | 74893 | TargetProcess | May 12, 2012 | May 17, 2014 | [Avatar]          |                           |             |
| FEATURES  | ID    | Effort        | State        | Progress     | Release           | Tags                      | Assignments |
| Edit User   | 84923 | 6 pt          | In Dev       | [Progress]   | 星 Hoshi 2.24.0    | quick add, team iteration | [Avatar]    |
| Prototype   | 73823 | 9 pt          | In Dev       | [Progress]   | Backlog           | .net                      | [Avatar]    |
| Advanced REST API   | 32721 | 22 pt         | In Dev       | [Progress]   | 2.24.1            | performance               | [Avatar]    |
| USERSTORIES   | ID    | Effort        | State        | Progress     | Release/Iteration | Tags                      | Assignments |
| Quick link to states settings from board                  | 84923 | 4 pt          | To Do        | [Progress]   | 2.24.1            | context saved board       | [Avatar]    |
| Axes sorting direction icon                               | 73823 | 2 pt          | To Do        | [Progress]   | Backlog           | performance               | [Avatar]    |
| Sorting direction should be changed when so...            | 28301 | 5 pt          | Planned      | [Progress]   | 2.24.1            | simple filter             | [Avatar]    |
| BUGS  | ID    | Effort        | State        | Progress     | Release           | Tags                      | Assignments |
| TBD: Search by Teams and No Project                       | 84923 | 1 pt          | Done         | [Progress]   | 2.24.1            | convert, js               | [Avatar]    |
| Test Plan Run Card on Board                               | 73823 | 1 pt          | Testing      | [Progress]   | 星 Hoshi 2.24.0    | .net                      | [Avatar]    |
| TASKS   | ID    | Effort        | State        | Progress     | Release           | Tags                      | Assignments |
| Live chat icon  | 26183 | 1 pt          | Done         | [Progress]   | 2.24.1            | .net, copywriting         | [Avatar]    |
| <b>Prioritize tab in Board settings: Disable prior...</b> | 32721 | 7 pt          | In Dev       | [Progress]   | Backlog           | comet, regression         | [Avatar]    |
| BUGS  | ID    | Effort        | State        | Progress     | Release           | Tags                      | Assignments |
| TBD: Search by Teams and No Project                       | 84923 | 1 pt          | Done         | [Progress]   | 2.24.1            | convert, js               | [Avatar]    |
| Test Plan Run Card on Board                               | 73823 | 1 pt          | Testing      | [Progress]   | 星 Hoshi 2.24.0    | .net                      | [Avatar]    |
| Performance: it takes 2-3 seconds to display ca...        | 28301 | 2 pt          | Tested       | [Progress]   | 星 Hoshi 2.24.0    | multi teams               | [Avatar]    |
| TASKS   | ID    | Effort        | State        | Progress     | Release           | Tags                      | Assignments |
| Live chat icon  | 26183 | 1 pt          | Done         | [Progress]   | 2.24.1            | .net, copywriting         | [Avatar]    |
| Board does not updated correctly after resetin...         | 27321 | 1 pt          | In Dev       | [Progress]   | Backlog           | regression                | [Avatar]    |
| Help: Teams flow  | 32721 | 1 pt          | In Dev       | [Progress]   | 2.24.1            | .net                      | [Avatar]    |
| JS error on adding team iteration from general...         | 26183 | 10 pt         | Planned      | [Progress]   | Backlog           | .net                      | [Avatar]    |
| Test Plan Card on Board                                   | 27321 | 2 pt          | Done         | [Progress]   | 2.24.1            | burn down                 | [Avatar]    |
| Search in tp2 and feature toggling                        | 28301 | 28 pt         | Planned      | [Progress]   | Backlog           | error handling            | [Avatar]    |

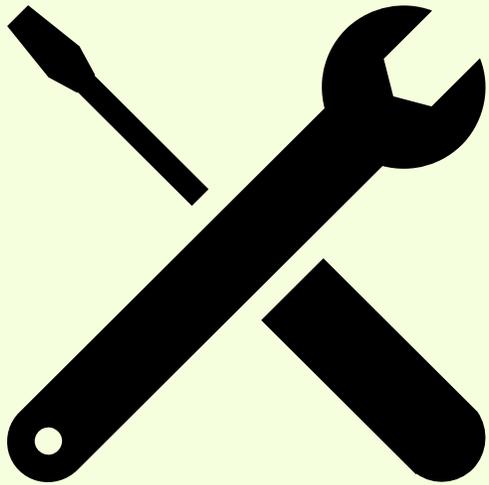
show more features...

|        |       |               |              |             |          |
|--------|-------|---------------|--------------|-------------|----------|
| board+ | 93844 | TargetProcess | Feb 12, 2013 | Aug 4, 2016 | [Avatar] |
|--------|-------|---------------|--------------|-------------|----------|



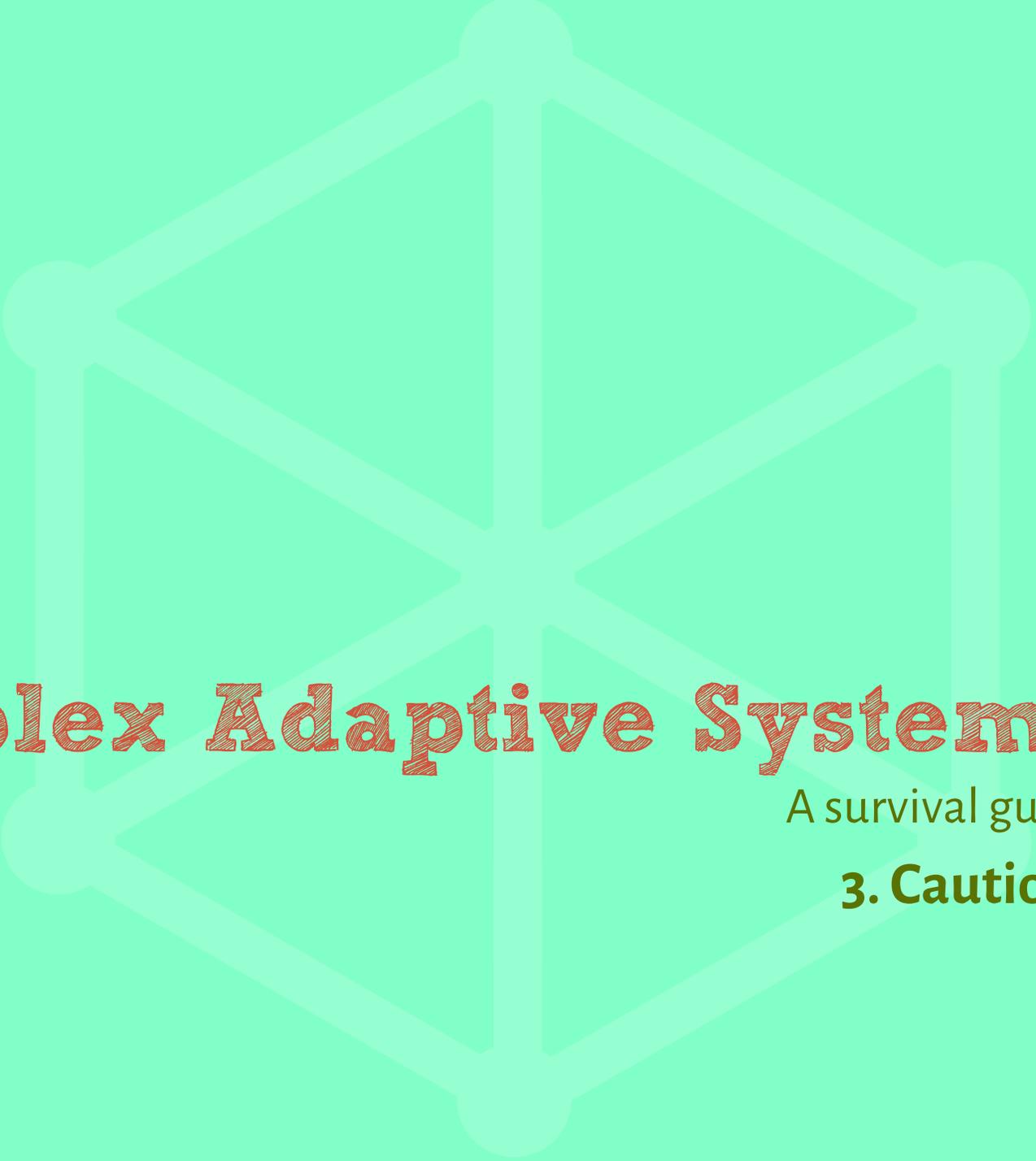


# Tools for CAS's



1. Granularity
2. Distributed cognition
3. Disintermediation





# Complex Adaptive Systems

A survival guide

## 3. Cautions





# A trap

Beware “wisdom of hindsight” a.k.a.  
“*Someone should have done something  
to avoid this...*”



# **Retroactive coherence**

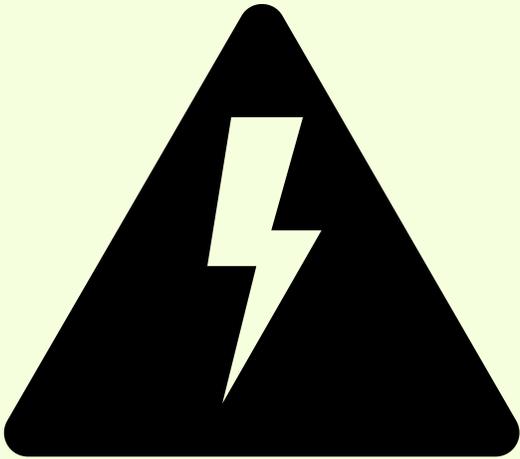






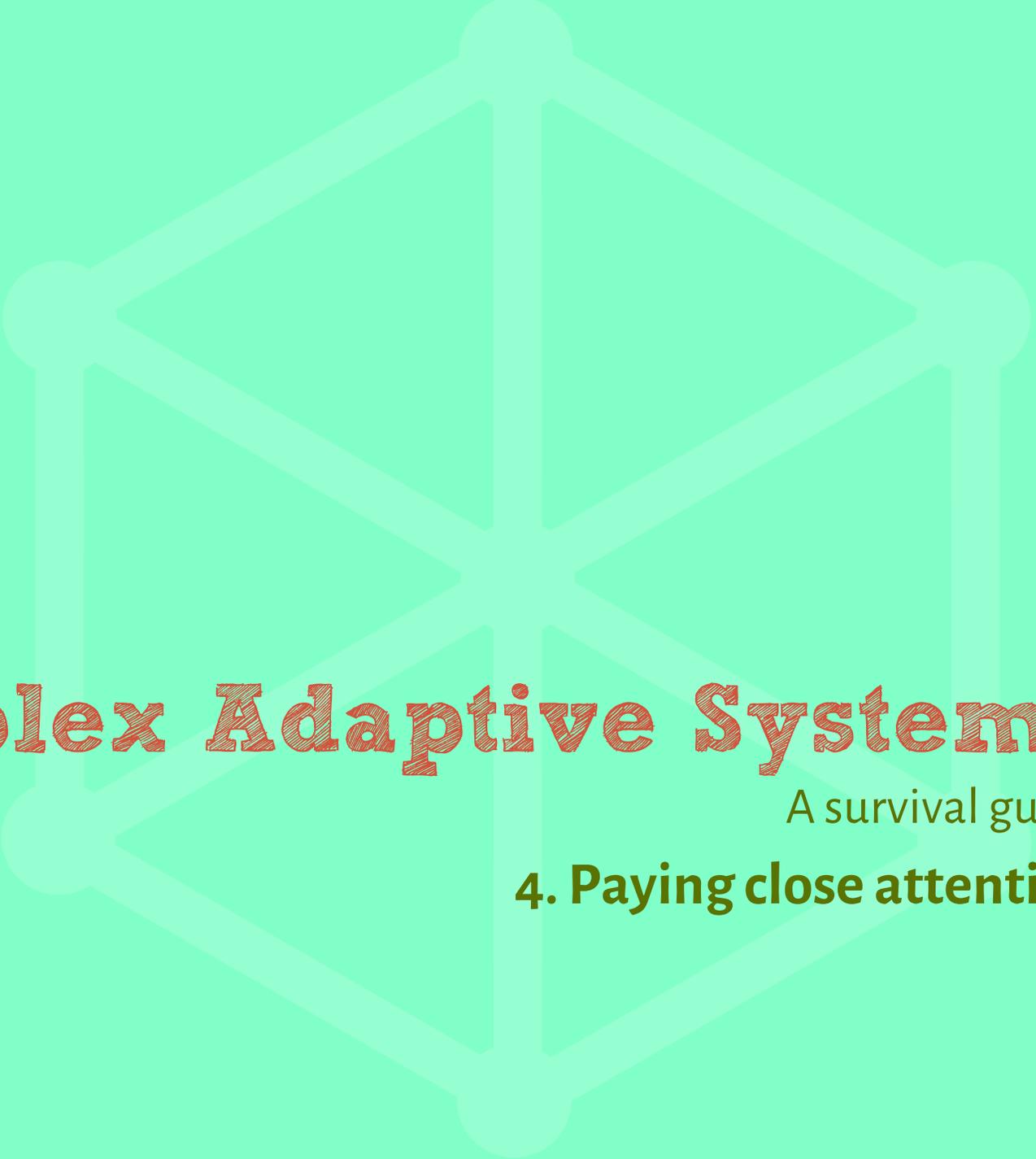


# Beware...



1. Premature convergence
2. Retroactive coherence
3. Pattern entrainment



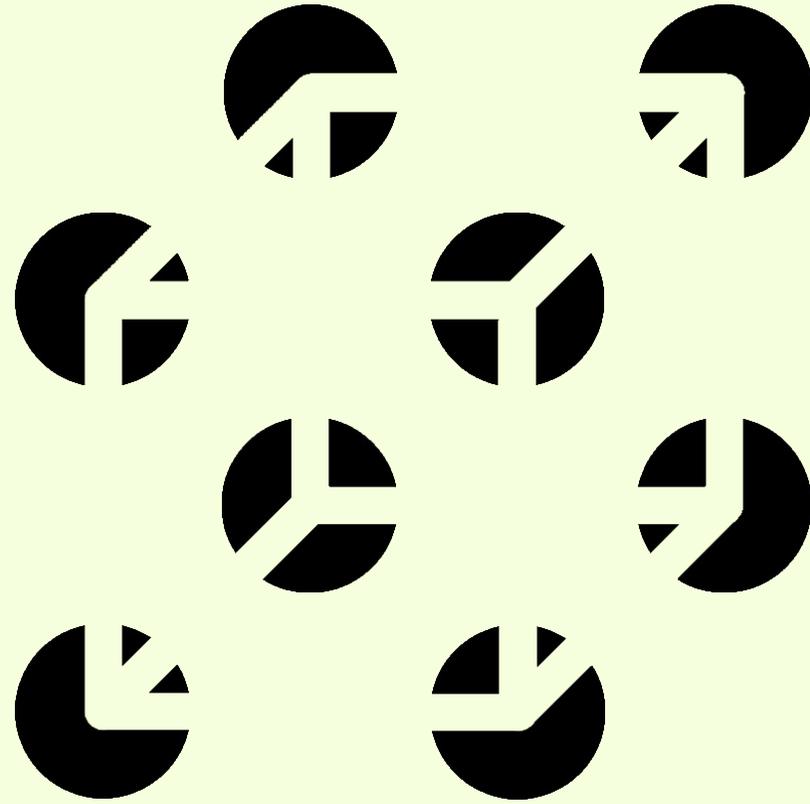


# Complex Adaptive Systems

A survival guide

## 4. Paying close attention





# The hard part



1. SEE the data
2. ATTEND (pay attention) to the data and
3. ACT on the data

...as three separate, conscious, deliberate processes.





# Cheat sheet

I know... I know...!



# Say that again...!

## CYNEFIN: GETTING STARTED – CHEAT SHEET

**Complex**  
 probe-sense-respond  
 Emergent Practice  
 Enabling constraints

**Complicated**  
 sense-analyze-respond  
 Good Practice  
 Governing constraints

**Chaotic**  
 act-sense-respond  
 Novel Practice  
 no effective constraints

**Obvious**  
 sense-categorize-respond  
 Best Practice  
 Fixed constraints

|  |                |   |   |  |
|--|----------------|---|---|--|
|  | Ask:           | 1. What can I change?   | 2. Of what I can change, what can I monitor?                            | 3. Of what I can monitor, how can I rapidly dampen failure or promote success? |
|  | Use:           | <ul style="list-style-type: none"> <li>Granularity</li> </ul>           | <ul style="list-style-type: none"> <li>Distributed cognition</li> </ul> | <ul style="list-style-type: none"> <li>Disintermediation</li> </ul>            |
|  | Beware:        | <ul style="list-style-type: none"> <li>Premature convergence</li> </ul> | <ul style="list-style-type: none"> <li>Retroactive coherence</li> </ul> | <ul style="list-style-type: none"> <li>Pattern entrainment</li> </ul>          |
|  | Pay attention: | 1. SEE the data   | 2. ATTEND (pay attention) to the data                                   | 3. ACT on the data   |

**Resources:**

- HBR article "A Leader's Framework for Decision Making" (from [HBR](#) or [ResearchGate](#)).
- Cognitive Edge [website](#): In particular "Resources", "Dispatches", and "Blog"
- Wikipedia – [Cynefin Framework](#)
- Contact Andrew Webster (Cynefin Practitioner, Facilitator, & Trainer) [andrew@wisdomat.work](mailto:andrew@wisdomat.work)

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## Situational Assessment

Know what you're dealing with... *before* dealing with it.

## Complex Adaptive Systems

How can you tell if you're dealing with one?

## What to do?

Getting started on applying Cynefin

## A recent, local example

"But how can you use this...?"

## Questions?

What questions do you have... that I can answer in the time we've got?

## Let's wrap it up

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## Cynefin Dynamics

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Paying it forward



# A recent, local example

---

“But how can you use this...?”

# Please Write This Big

COMPLEX

PROBLEM - How to handle SESSION NOTES

Provision deep understanding

① Hour Responsible for notes taken + copy of info put into attendance taken notes + chart + attendance provided - for uploading to Neuron

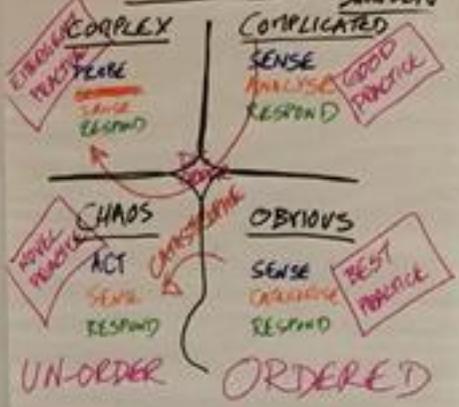
② Technology  
 a) Upload to website - Volunteer  
 b) Participants inputs (photos) unofficial  
 LinkedIn? MSN website? Twitter?

③ How fast to make public to other attendees?

④ Staffing

⑤ Logistics/locations - PCs

CYNEFIN DAVID SUTHERLAND



W1 73 ... 2 (Aston) ... Facility

COMPLICATED

PHSD - Stage unofficial + Vol more to official website  
 City of PCs - Event Laptops + Volunteer laptop  
 USB cables to connect to different phones (Iphone or Android)

Check sheet for volunteers / Info for attendees (Program) - map

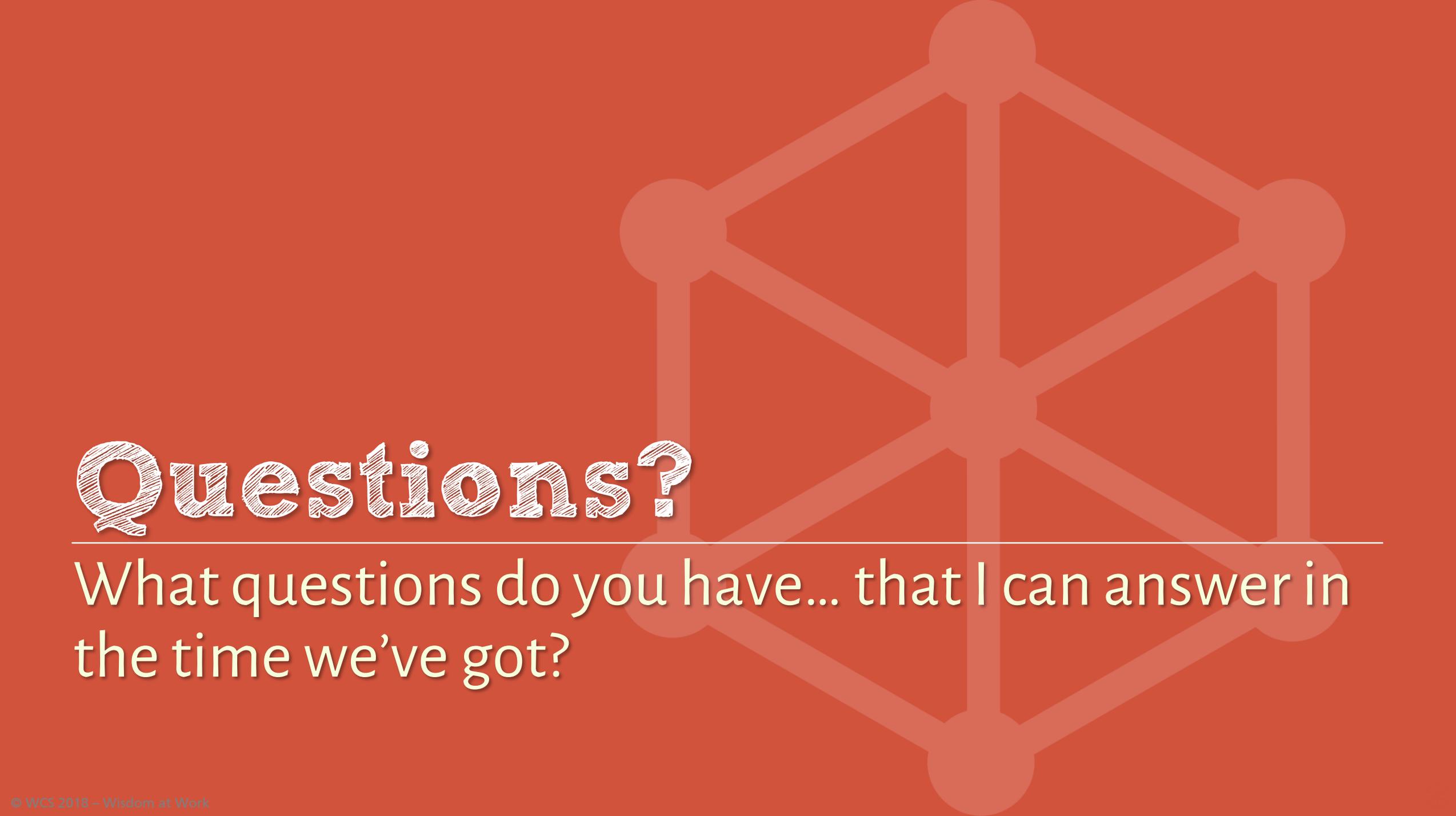
Loading into website - Morning session by end of day  
 Aft. Sessions by end of next day

- Define hash tag - (Twitter, LinkedIn)  
 Registration Desk -> New Room  
 Setup time (locations, etc)

Avoid crashing of website.

Symposium page  
 Session folders





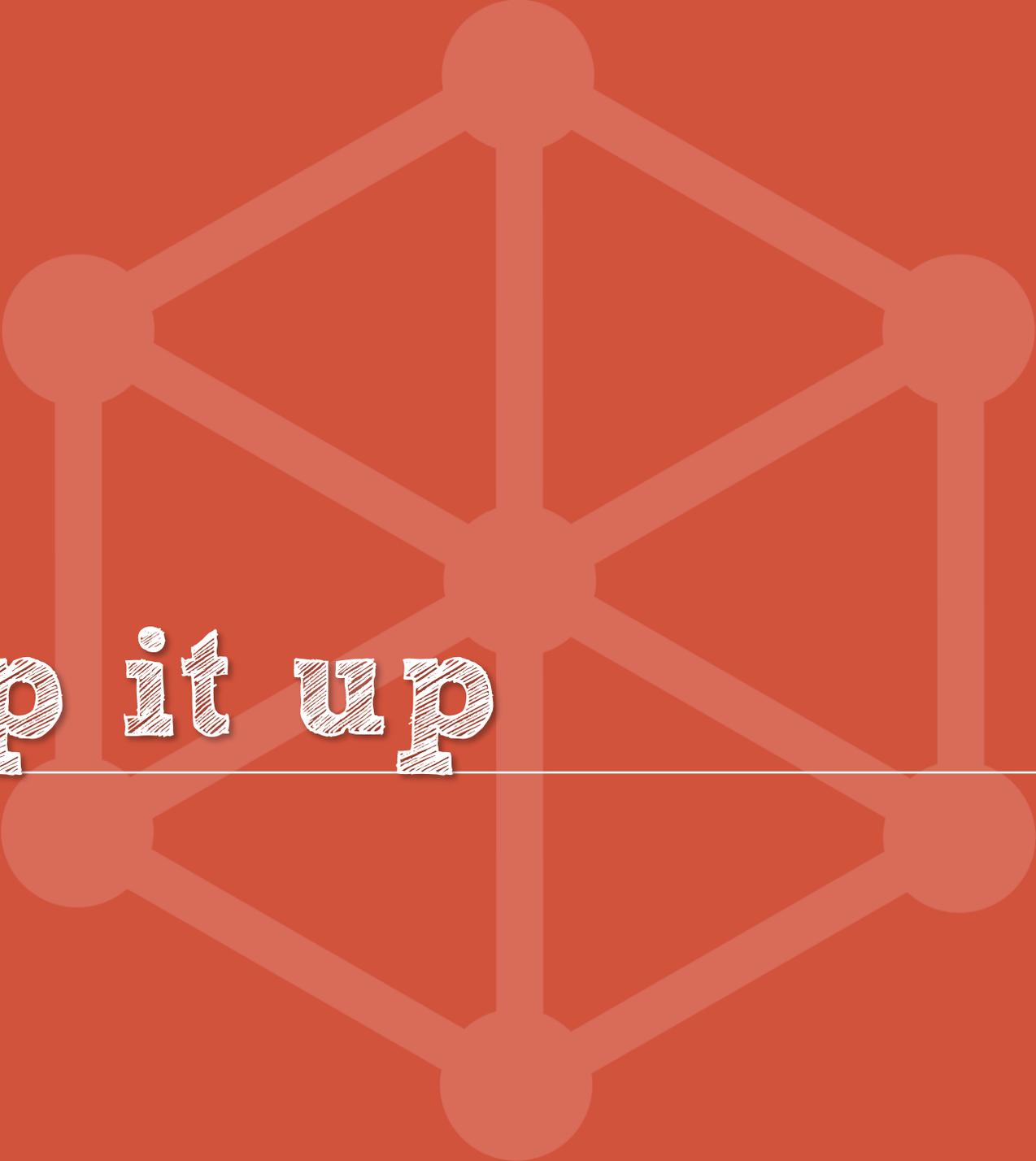
# Questions?

---

What questions do you have... that I can answer in the time we've got?

**Now... any questions?**

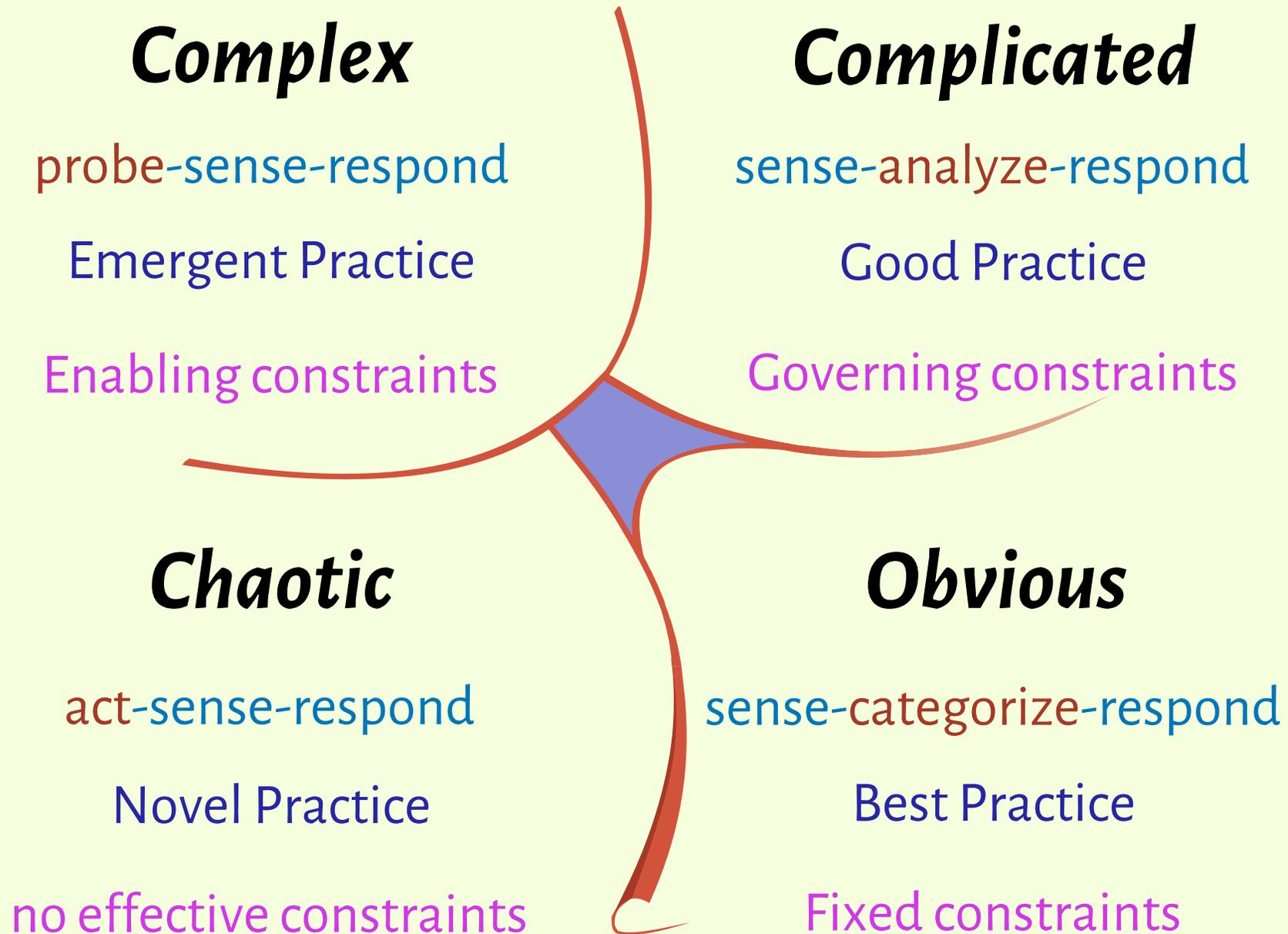




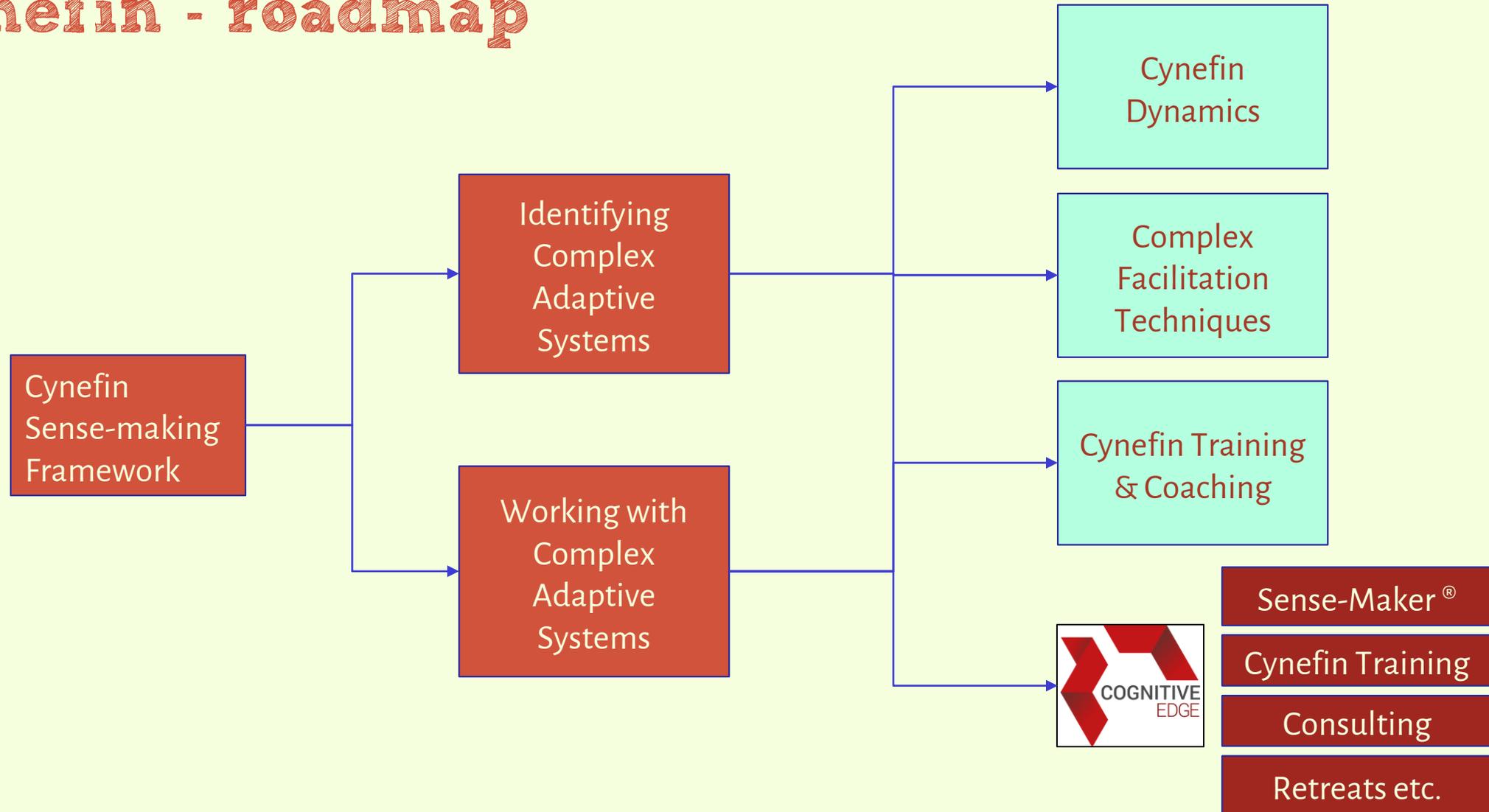
Let's wrap it up

---

Recap and reminder



# Cynefin - roadmap



# Andrew Webster



Chief cook and bottle washer at  
WCS, LLC “Wisdom at Work”

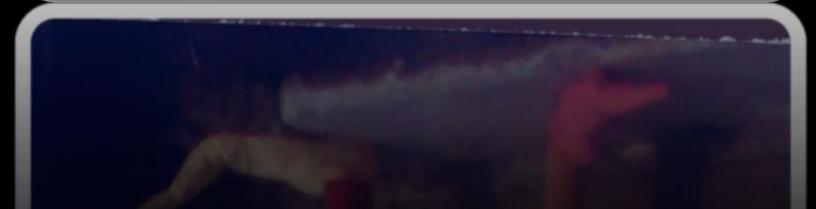
*Know what to do - when you don't know what to do!*

Contact:

- [andrew@wisdomat.work](mailto:andrew@wisdomat.work)

Available for:

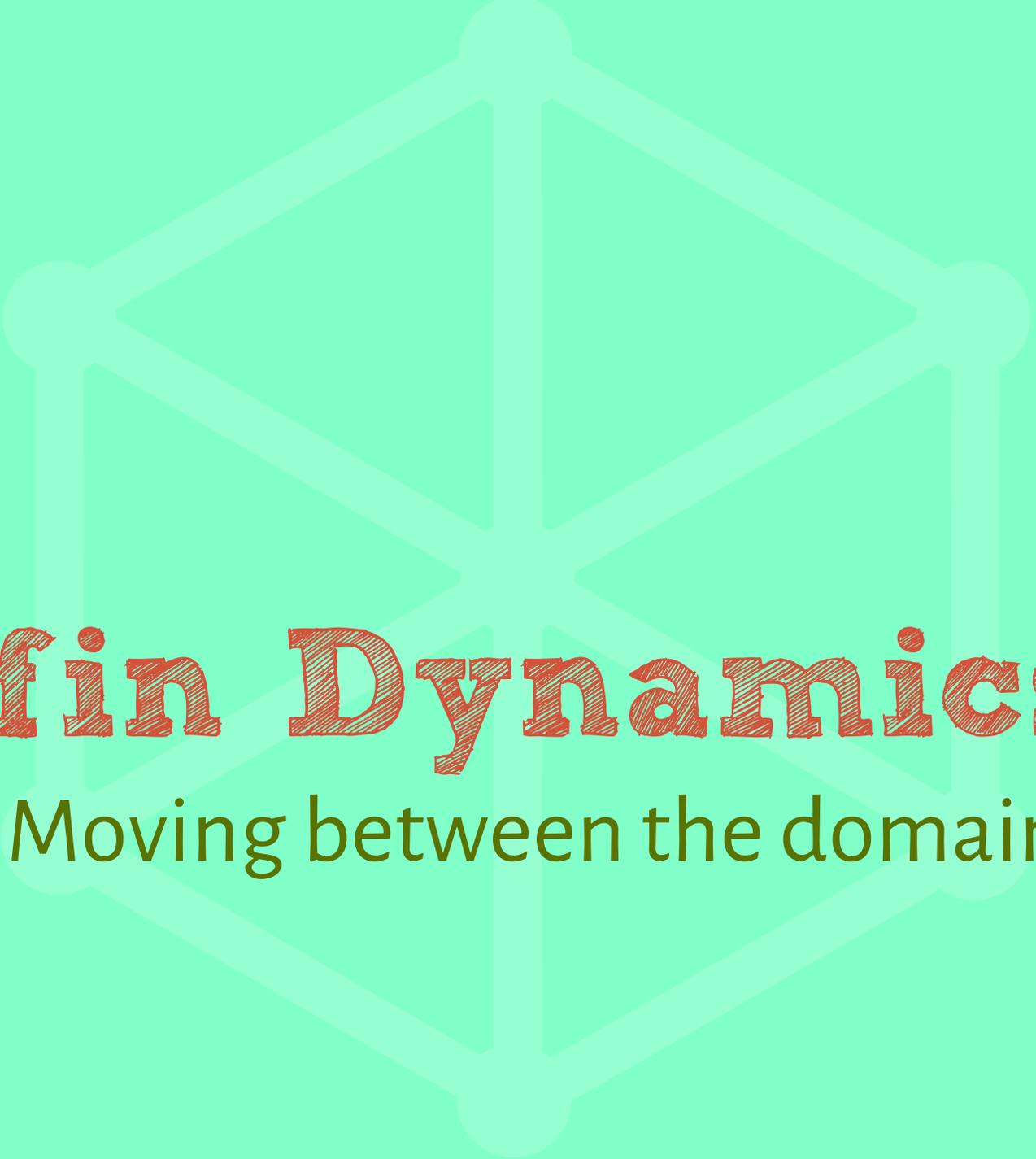
- Training
- Coaching
- Speaking
- Bar mitzvahs, weddings, funerals



# References

- HBR article “A Leader’s Framework for Decision Making” (from [HBR](#) or [ResearchGate](#)).
- Cognitive Edge website: In particular “Resources”, “Dispatches”, and “Blog”
- Wikipedia – [Cynefin Framework](#)
- Kurtz, C.F. & Snowden, D.J. (2003) The new dynamics of strategy: Sense-making in a complex and complicated world *IBM Systems Journal*, Vol 42, No 3, pp.462-483

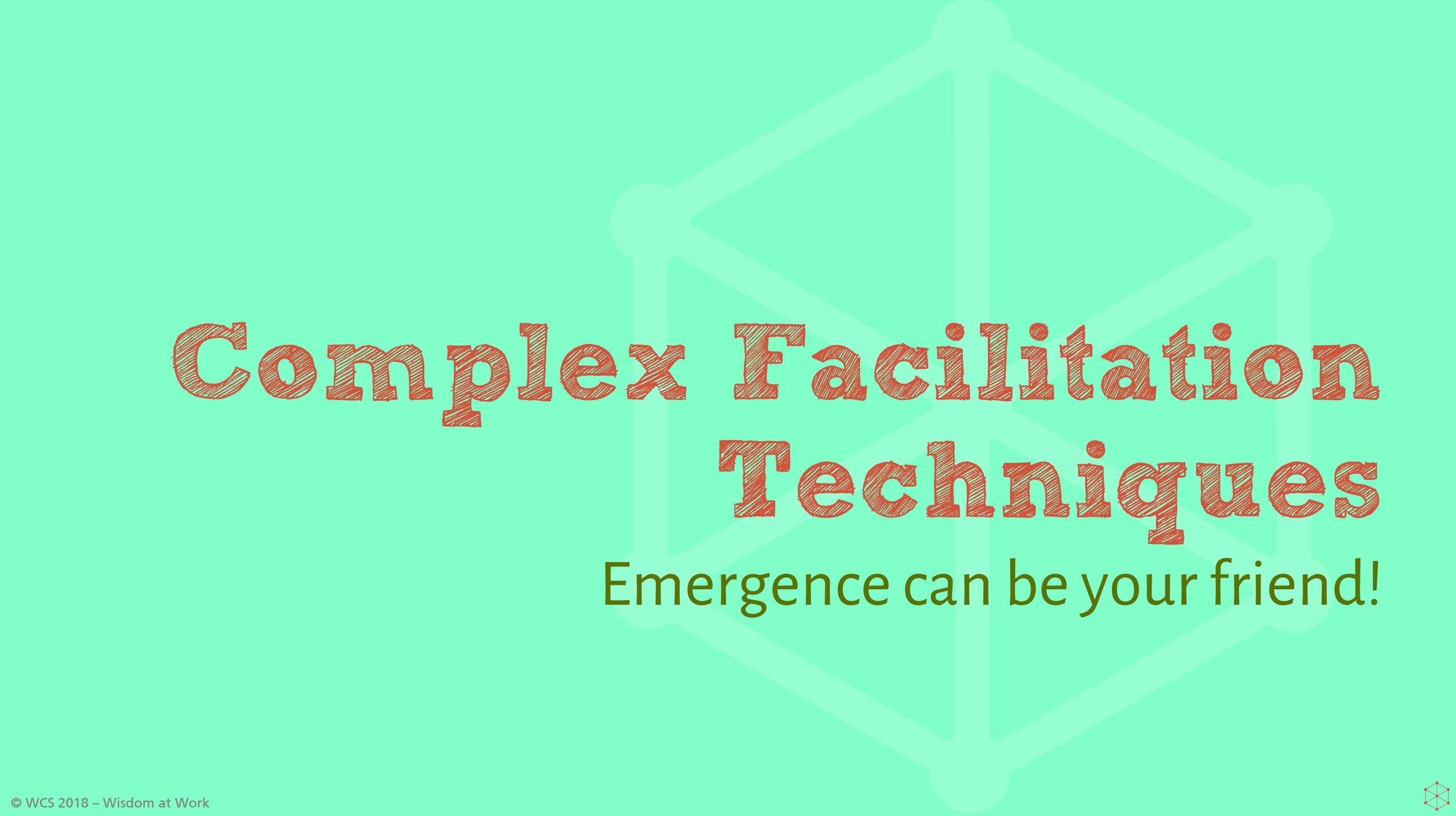




# Cynefin Dynamics

Moving between the domains

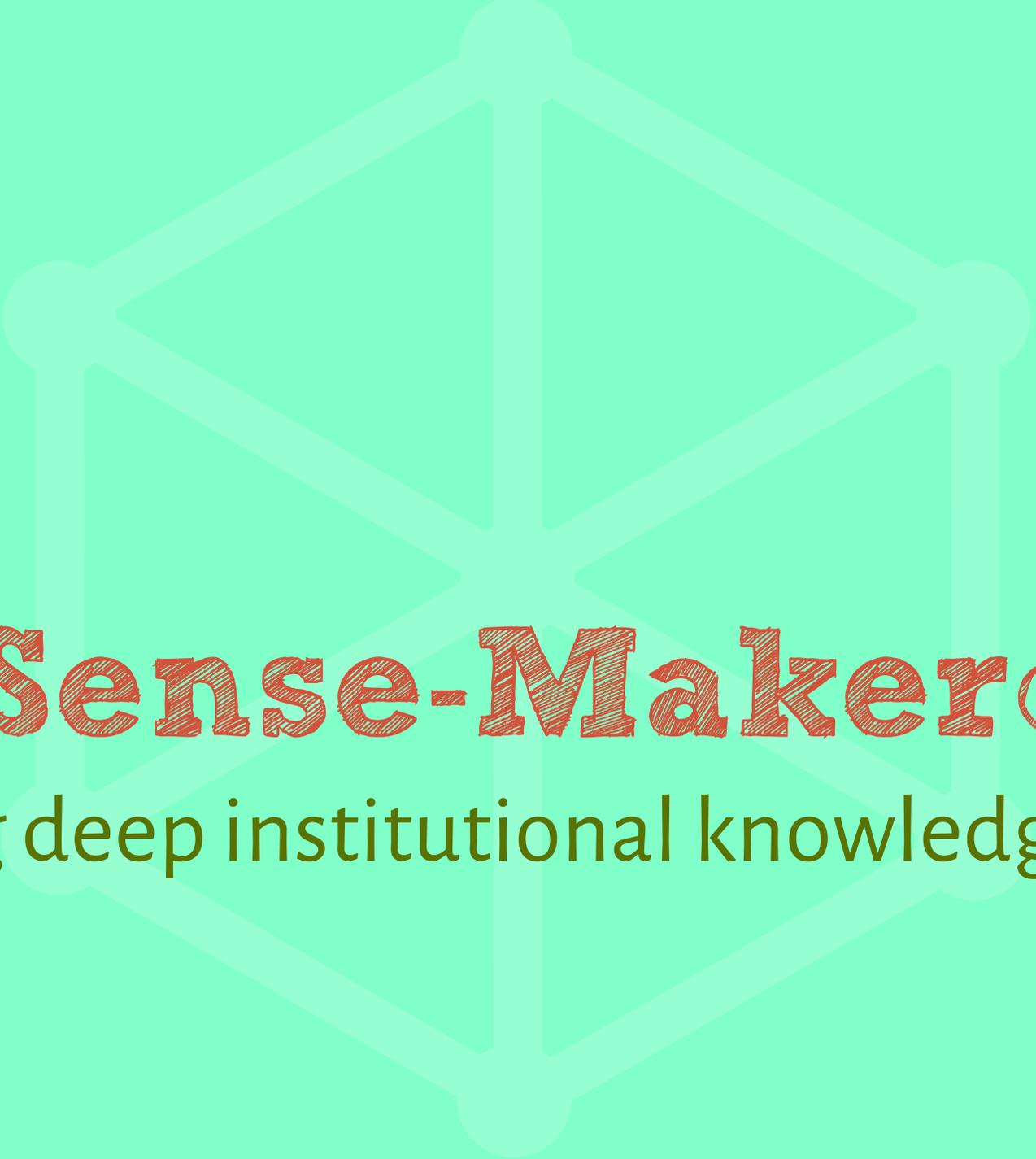




# Complex Facilitation Techniques

Emergence can be your friend!





# Sense-Maker®

Revealing deep institutional knowledge





# Cynefin Training

Paying it forward

