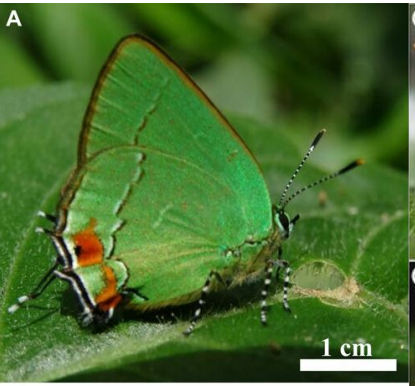
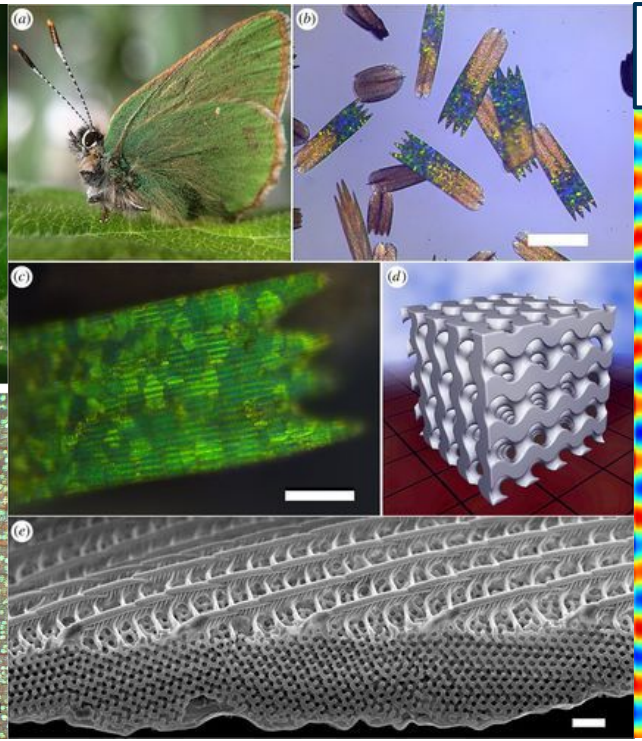
Armakuni

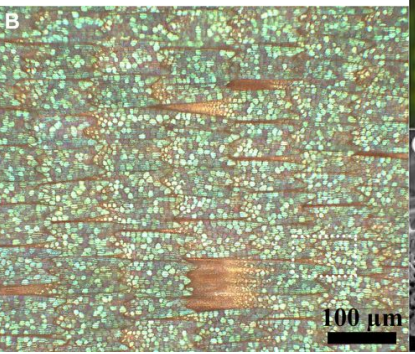
A Lean DevOps Approach to Learning & Development

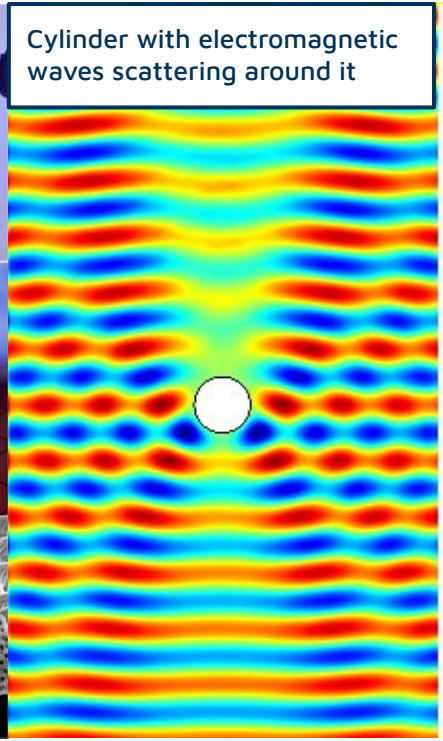
Sorrel Harriet
armakuni.com

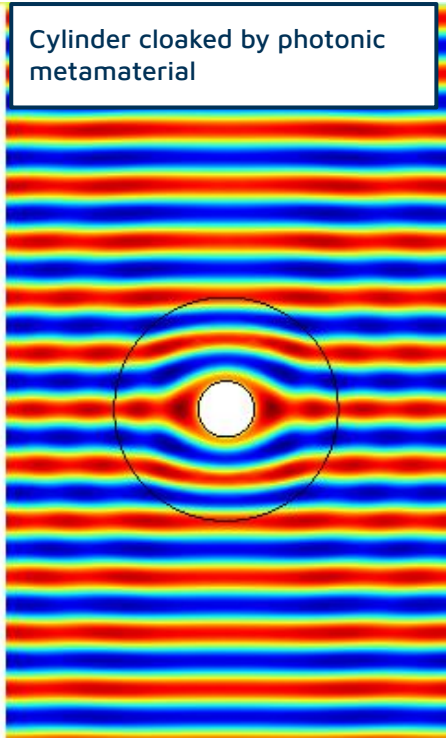
Butterfly gyroid nanostructures











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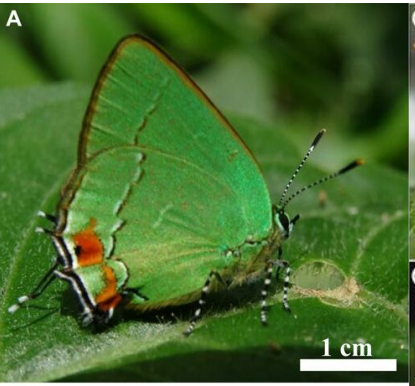
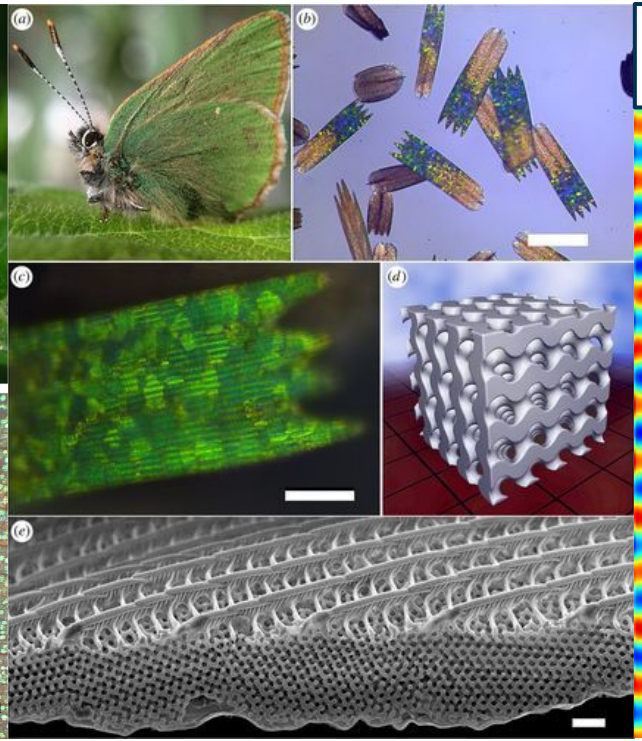
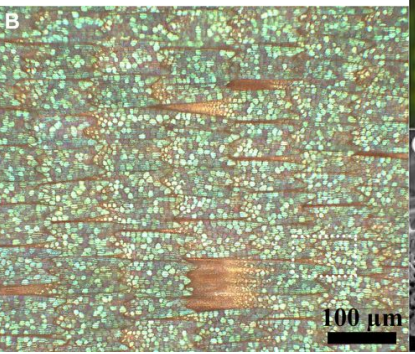
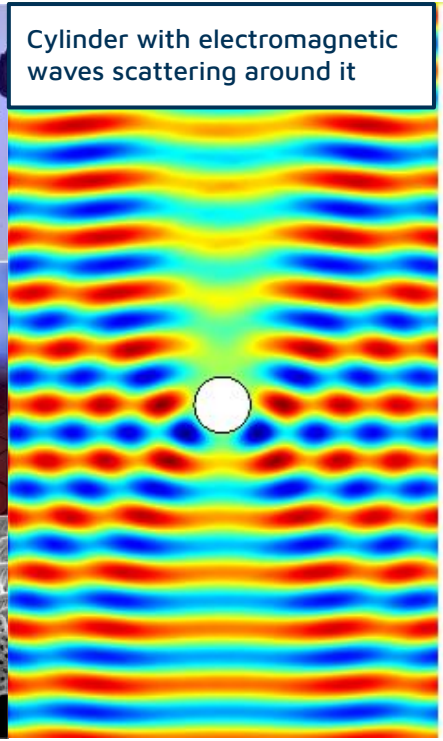
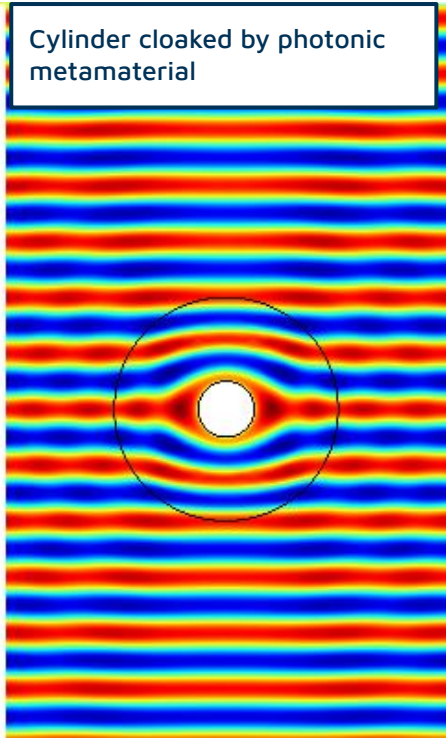
Butterfly gyroid nanostructures











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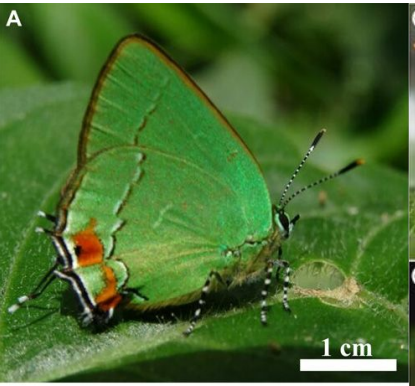

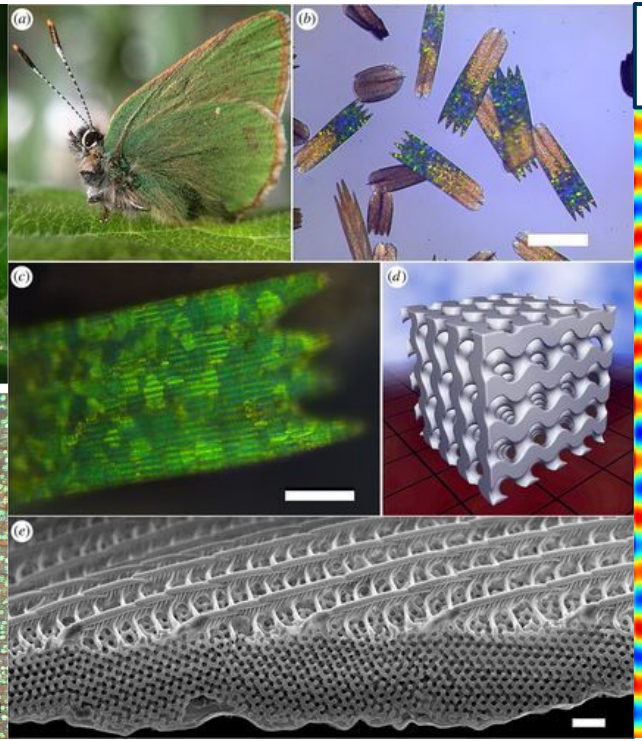

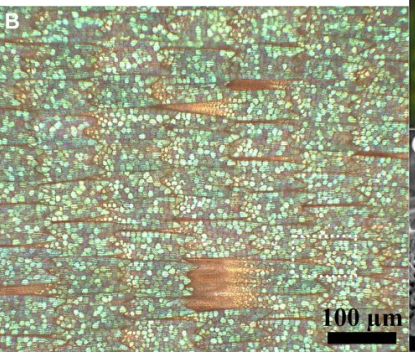

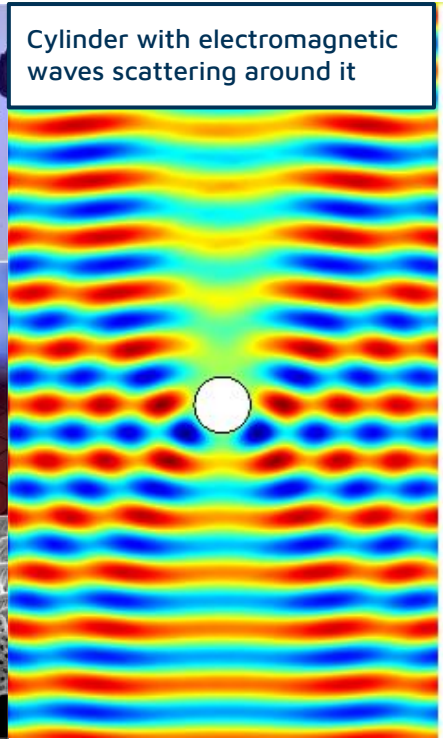

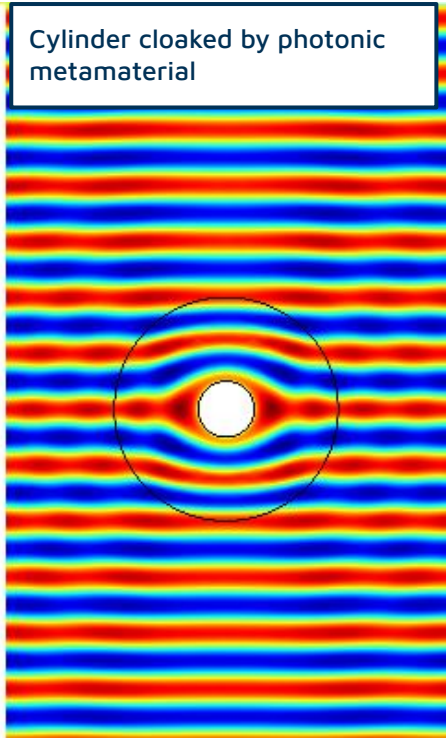

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Introductions

Sorrel Harriet
Continuous Learning Lead

Fun fact
I won my first computer in a competition

Armakuni

“Our expert engineers work with your team, side by side, to deliver technology, change and learning solutions that make a difference.”

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“I am not a learning and development manager”

Continuous Learning Lead

We're here to learn...
We'll get there by...
We'll know we're there when...
We'll do it by...
Why learning should be autonomous
Exploring learning past and present
I see jazz hands
10 mins
A model for lean learning
Drawing inspiration from Lean Principles
You see 3 butterflies
20 mins
Mechanisms to support lean learning
Hearing some true stories
Confucius bursts my bubble
30 mins

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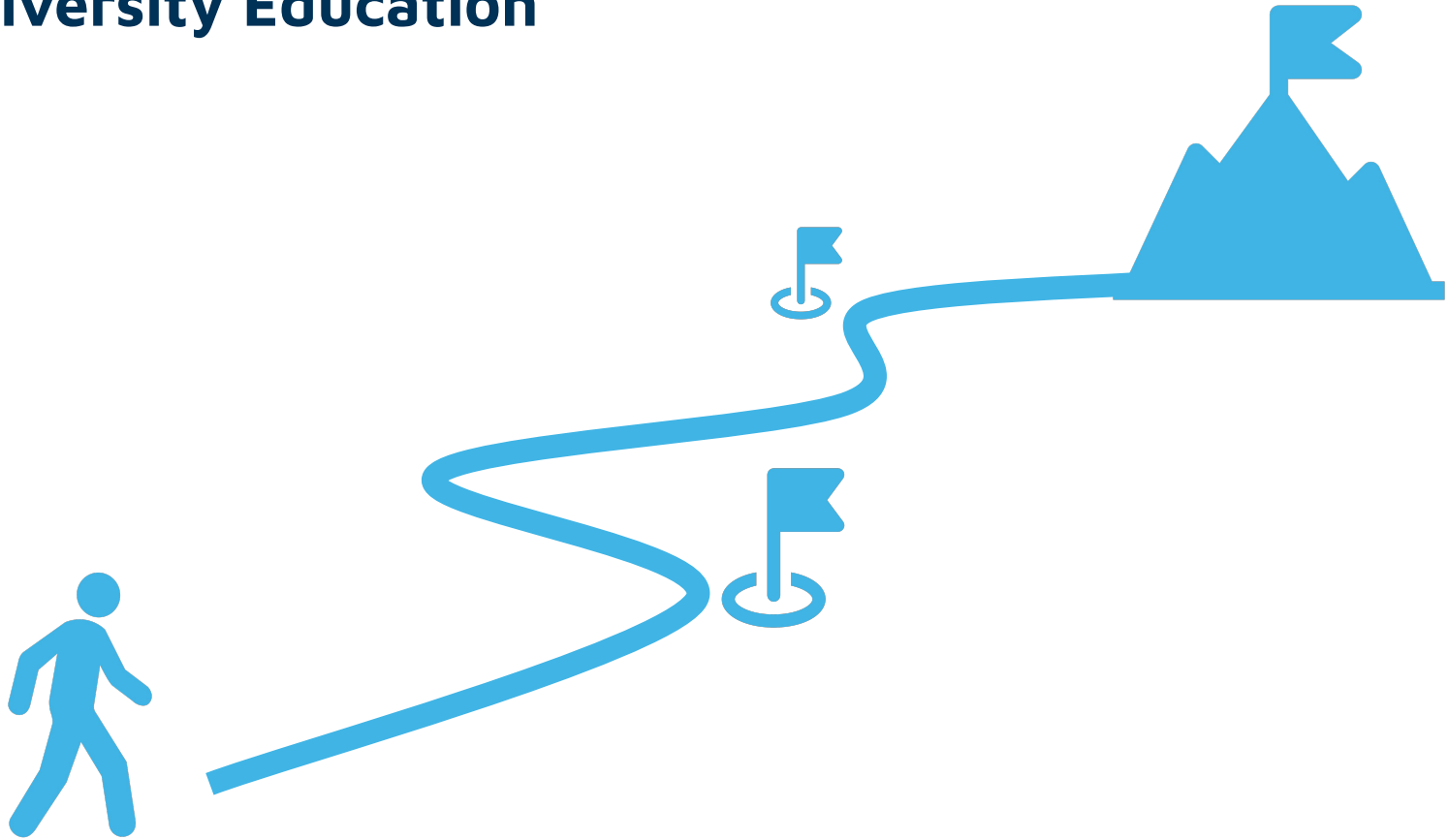
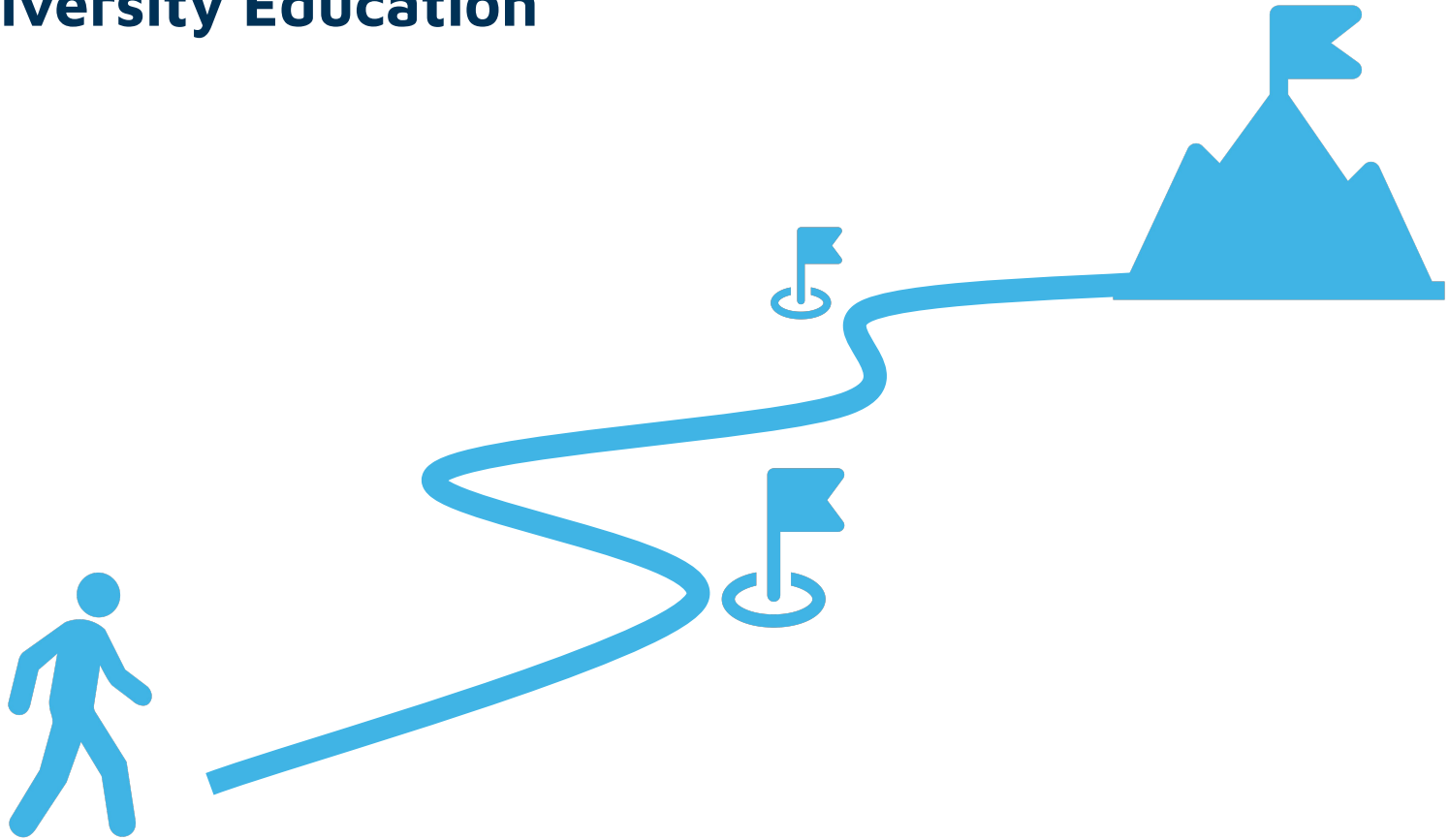
University Education



University Education



“I still don’t know what I want to be when I grow up”

1 in 3 Armakuni employees

I rarely read a work related book from start to finish	39%
I don't feel I have enough time for learning	37%
I struggle to stay focused on a single learning pathway	34%
I start online courses and don't complete them	20%
I experience stress with respect to the above	27%

“I dip in and out of things”

44% Armakuni employees

Butterfly minds

Factory model of education

Agricultural model of education

We have to recognize that human flourishing is not a mechanical process–it's an organic process. And you cannot predict the outcome of human development. All you can do, like a farmer, is create the conditions under which they will begin to flourish.

Ken Robinson, educationalist

Ken Robinson (2010) *Bring On the Learning Revolution!* TED Talk.

Managers who measure and instruct

Under systematic management, the best man rises to the top more certainly and more rapidly than ever before.

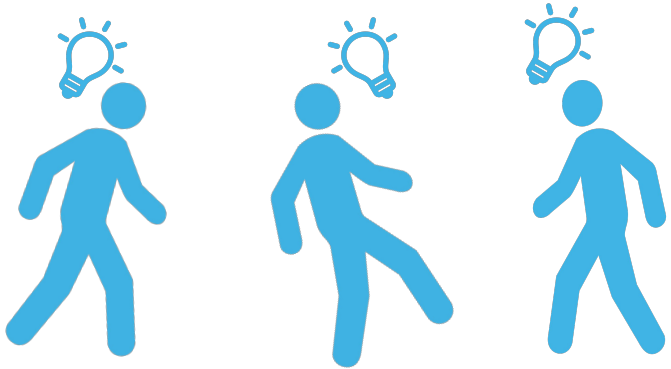
Frederick Taylor, management theorist

Frederick Taylor (1919) *The Principles of Scientific Management*. Harper & Brothers (NY).

Leaders who foster autonomous learning

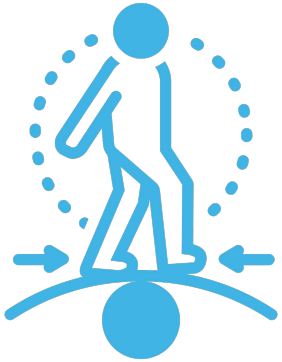
Organisations learn only through individuals who learn.

Peter Senge

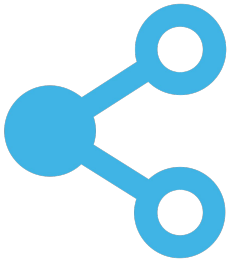


Peter Senge (1990) *The Fifth Discipline*. Random House Business.

Self-Determination Theory



Competence



Relatedness

Autonomy

E. Deci and M. Ryan (2000) *The "What" and "Why" of Goal Pursuits*. Psychological Inquiry, Vol 11, No 4.

How do we grow butterflies?

Humans are hard-wired for learning

> **“What kills learning pleasure are those who try to divide, organise or control it.”**

John Holt

J Holt (1964) *How Children Fail*. Penguin Education.
A Taylor (2009) An Unschooled Life (YouTube).

> **Lessons come from people, not as a blueprint, but as a possibility.**

Tumi Mogorosi, jazz musician

Tumi Mogorosi (2017) *A Jazzuary 2017 Masterclass* (YouTube)

“Lessons come from people, not as a blueprint, but as a possibility.”

Tumi Mogorosi, jazz musician

Awareness development

Tumi Mogorosi (2017) *A Jazzuary 2017 Masterclass* (YouTube)

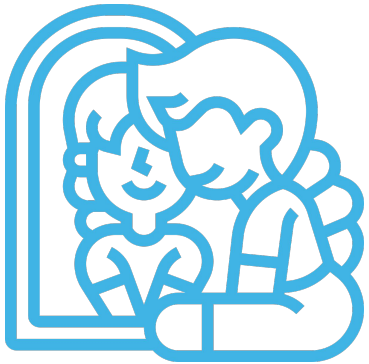
“Horizontal learning is essentially technical training: a transfer of content—information, techniques—in focused areas.

The counterpart of horizontal learning is vertical development, which highlights awareness development.”

Dorothy Siminovitch, coach

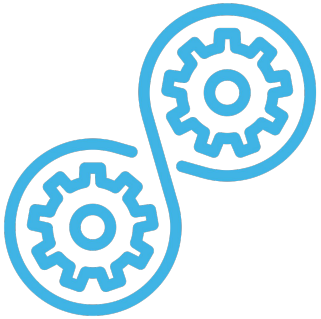
Dorothy Siminovitch (2019) *The Coach as Awareness Agent*. gestaltcoachingworks.com

Vertical development



Self

Environment



Systems

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We'll get there by...
We'll know we're there when...
We'll do it by...
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Leaning on lean principles

Define Value — What do I want to learn?

Map Value Stream — What activities can generate value here?

Create Flow — How will I maintain progress?

Establish Pull — Where can I apply this in my work?

Leaning on lean principles

Define Value — What do I want to learn?

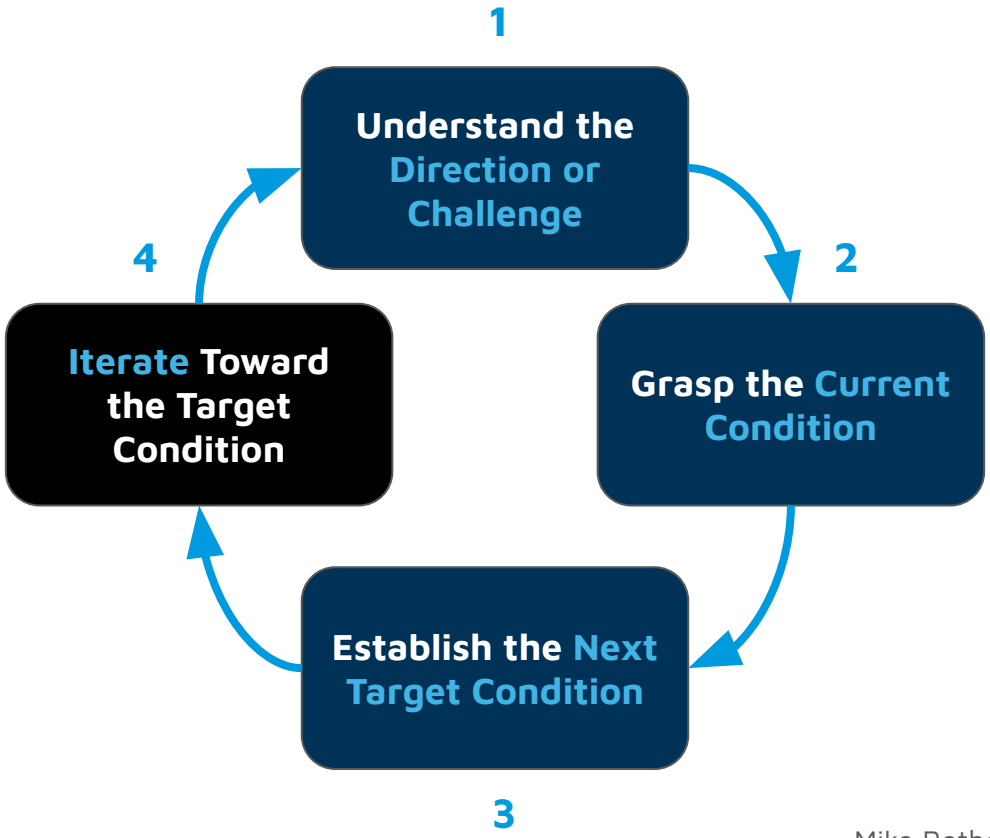
Map Value Stream — What activities can generate value here?

Continuous Improvement

Create Flow — How will I maintain progress?

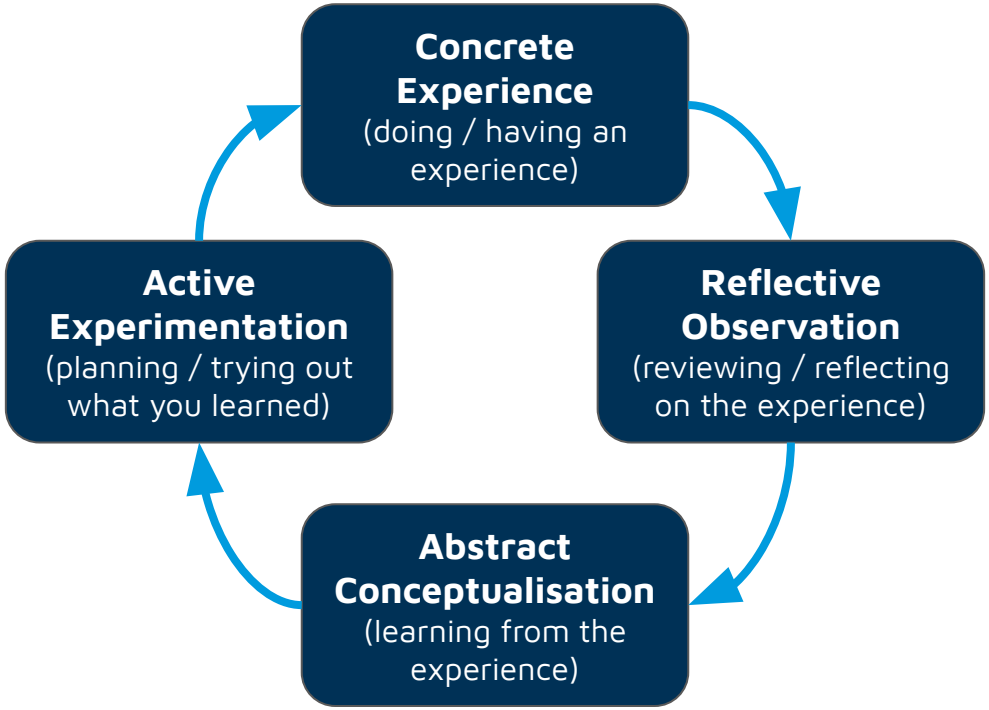
Establish Pull — Where can I apply this in my work?

Toyota improvement kata



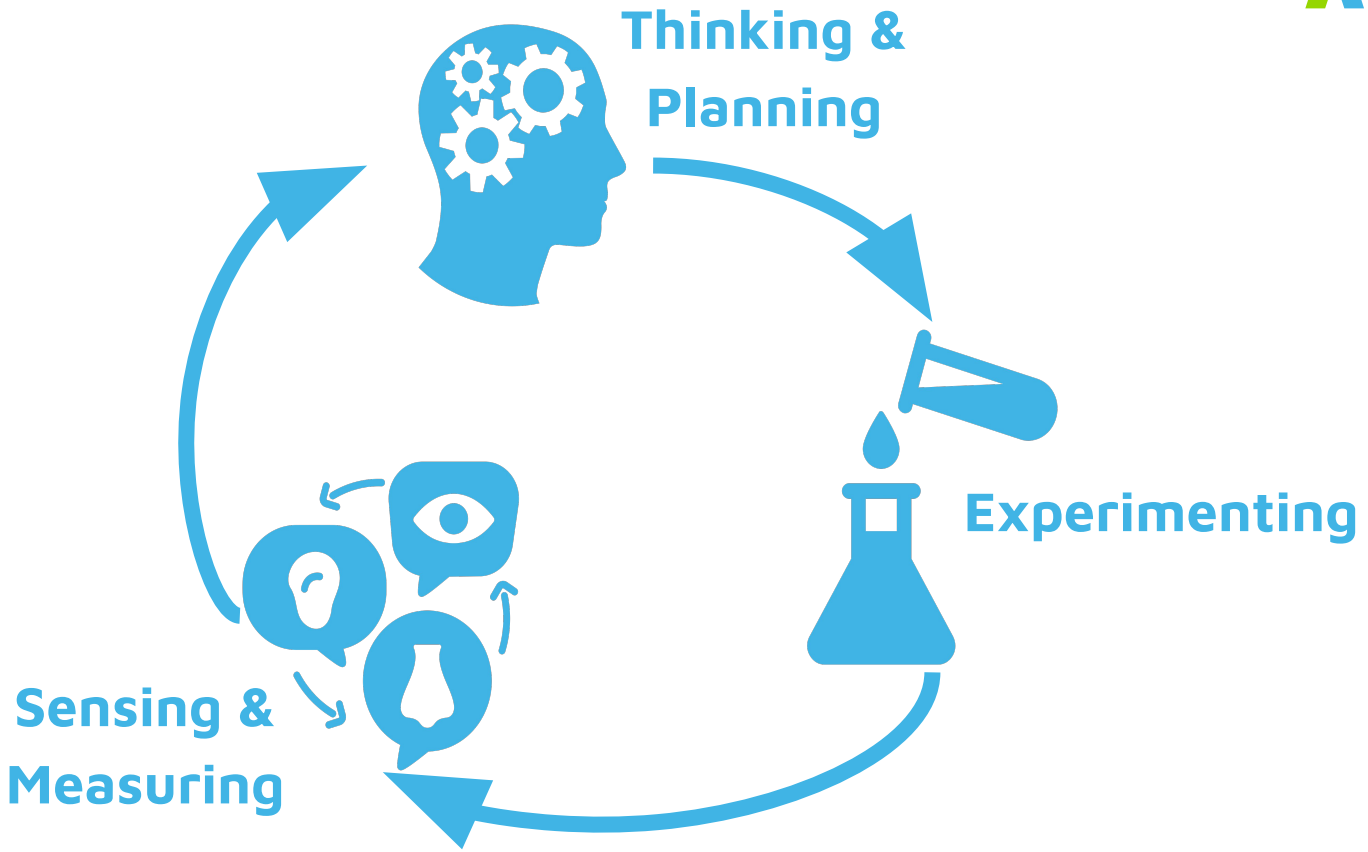
Mike Rother (2009) *Toyota Kata*. McGraw Hill.

Kolb’s experiential learning cycle



David A. Kolb (1984) *Experiential Learning*. Prentice-Hall.

Learning as a lean process



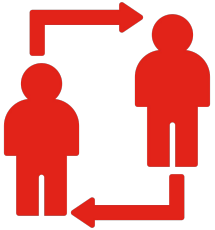
Optimising for learning flow

Coaching

Raising awareness and personal responsibility to unlock potential. Emphasises goals, not standards.

Reflective learning

Think critically about how your knowledge, skills and understanding are developed through your experiences.



Feedback

Give each other feedback which focuses on future development and growth. "Feed-forward"

Community

Come together as a community, to learn and collaborate toward shared goals.

Meet Ronald, Shane & Joe

Ronald Dadds,
Consulting Engineer

Shane Harger,
Lead Consulting Engineer

Joe Blackman,
Lead Consulting Engineer

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We're here

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Meet Ronald, Shane & Joe

Ronald Dadds,
Consulting Engineer

Shane Harger,
Lead Consulting Engineer
Pastoral manager to Ronald

Joe Blackman,
Lead Consulting Engineer
Leads on Ronald's engagement

1. Learning backlog

Goals ("I want to learn...")	Actions ("I will learn by...")			Measurements ("I'll know I'm successful when...")			Deadlines ("I'll do it by...")
Implement and maintain a CI/CD pipeline	Speak to another AK-er about what production on day 1 would look like	Look for someone to pair with on this (e.g. Brian)	Implement a pipeline for a small project ("production on day 1")	Every commit results in API end point which provides commit ID	Another AK-er has reviewed my pipeline	I feel confident that I could repeat the steps and act on the feedback	Something reviewable by 6th May
How to practice TDD to a good and consistent level	Do a bit of reading on TDD (e.g. TaaP resources)	Use TDD to design a small python project	Work on a small python project practicing TDD consistently and deliberately	When it becomes second nature to write a test before solving the problem in code	Another AK-er has reviewed my code and given me some feedback	I have shared something I've learned about TDD with another person/people	Something demo-able by 20th May
Enough python to be able to do my job well.	Find out who's working with python on client work and get them to demo some of their codebase to me.	Spec out a small python project	Work on a small python project	I feel I know how to structure my python project	Another AK-er has reviewed my code and has indicated it is up to scratch	I have created a new guru card about python best practices	
	Ask the community what python features they like/find useful on client work						Possibly full demo 17th June

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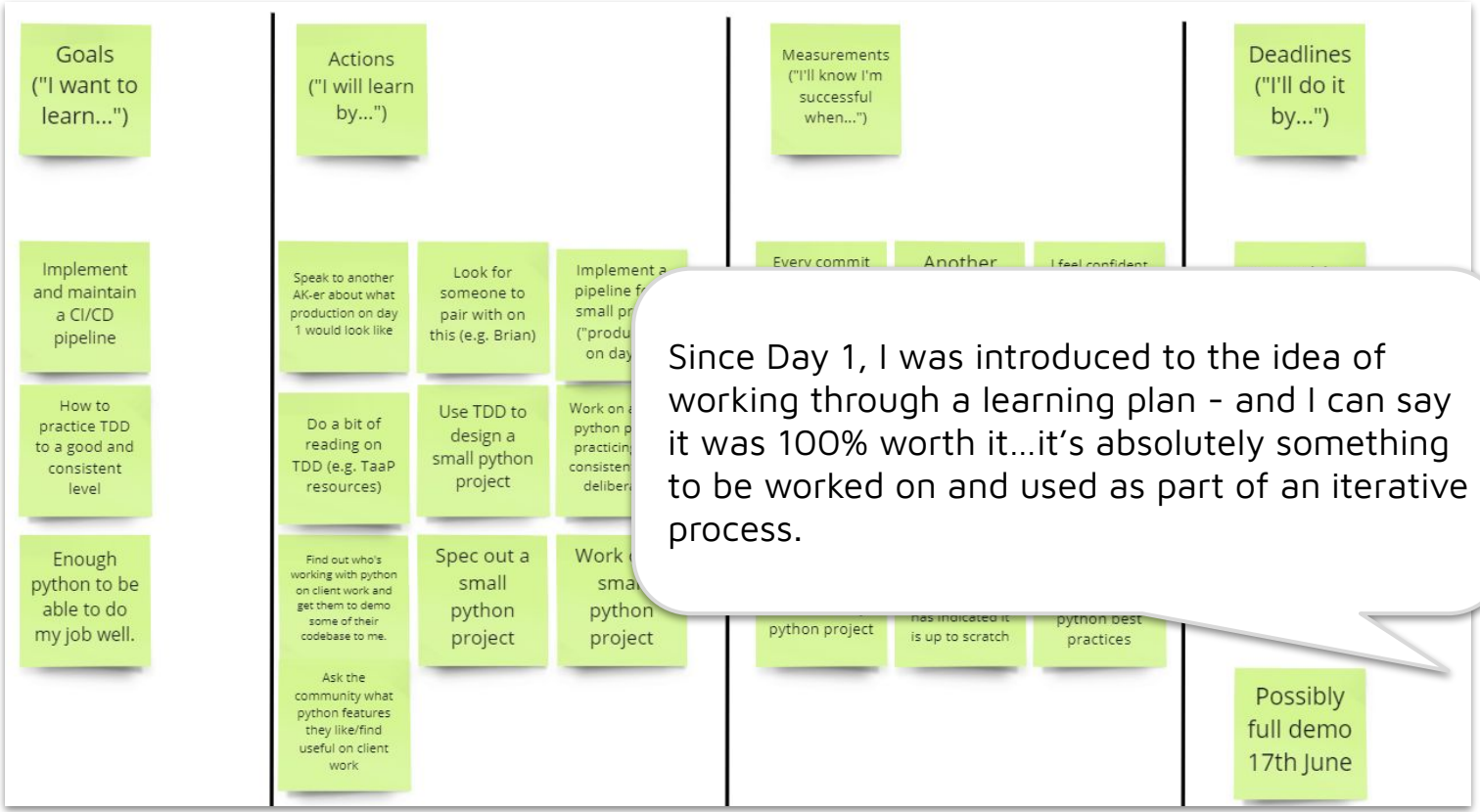


Since Day 1, I was introduced to the idea of working through a learning plan - and I can say it was 100% worth it...it's absolutely something to be worked on and used as part of an iterative process.

2. Pastoral management

Ronald Dadds, Consulting Engineer

I've really enjoyed having a regular meet-up with my pastoral manager. They've always listened to any areas I've expressed an interest in learning and have provided information about what my next steps could be.

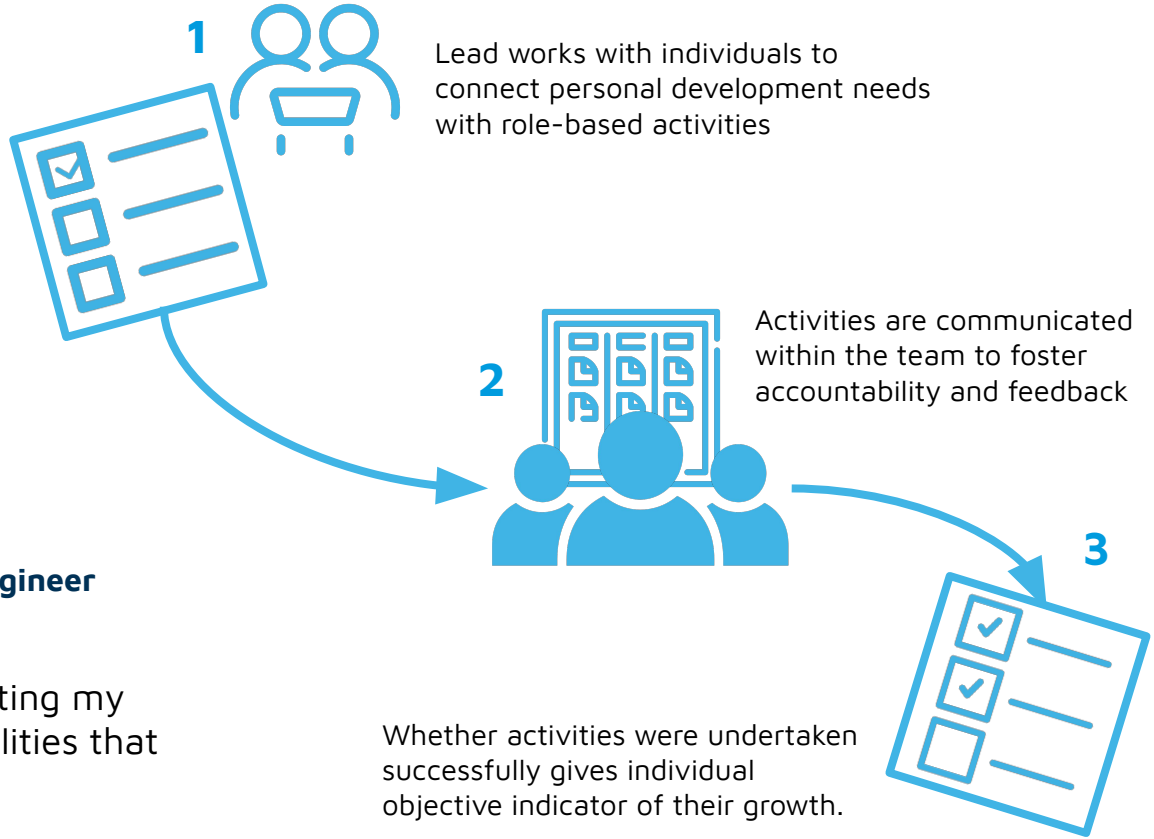
I found the 1:1 really helpful...I left feeling I had a lot more clarity

You brought to my awareness areas of learning that I hadn't even considered

3. Engagement leadership

Joe Blackman, Lead Consulting Engineer

> I aim to do less, by supporting my team to take on responsibilities that support their growth



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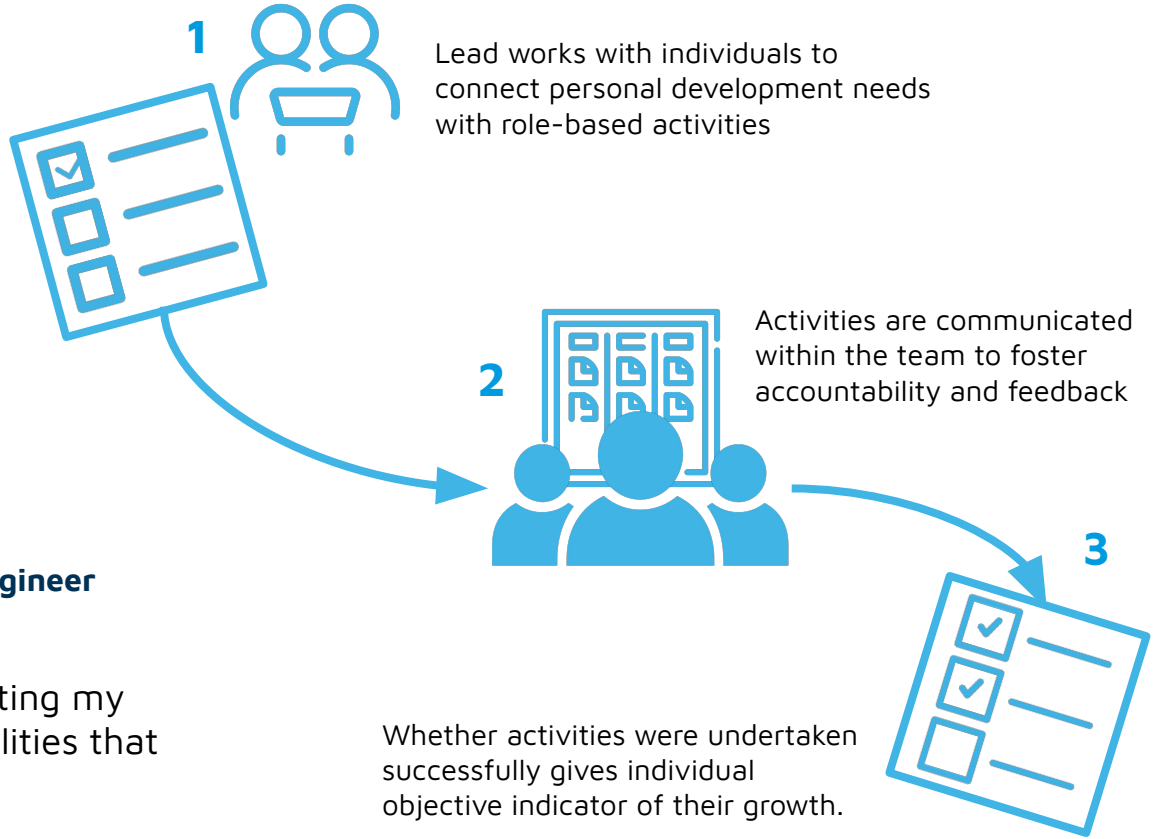

3. Engagement leadership

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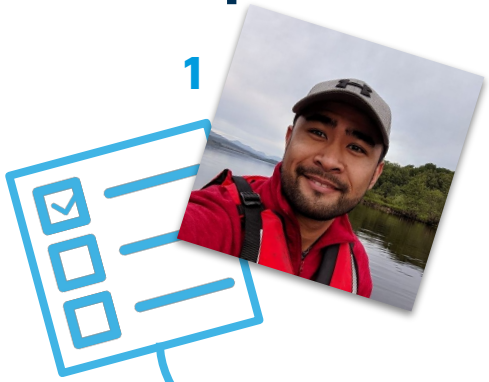
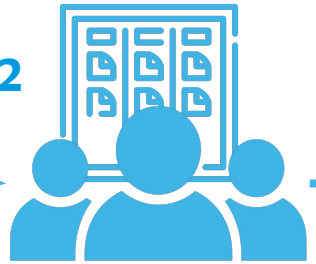


"Joe helped me take on additional responsibilities to support my development goals"

2



"I can evidence the progress I am making"

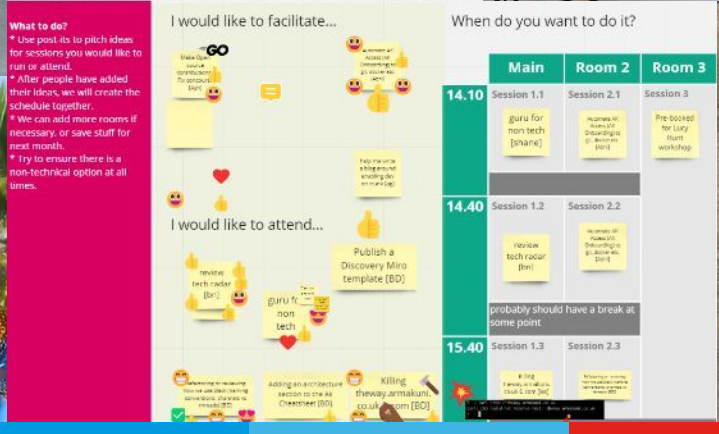
3

"The team provides a safe and supportive environment where I can try things out and get fast feedback"

4. Learning days

5. AK Days!

Thinking Together
Communities of practice
Shared
Sense of Community
(Pyrko, Dörfler, Eden, 2016)
(Bechky, 2003)

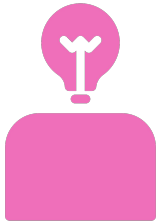

What to do?
* Use post-its to pitch ideas for sessions you would like to run or attend.
* After people have added their ideas, we will create the schedule together.
* We can add more rooms if necessary, or save stuff for next month.
* Try to ensure there is a non-technical option at all times.
I would like to facilitate...
GO
I would like to attend...
Publish a Discovery Miro template [BD]
When do you want to do it?
Main
Room 2
Room 3
14.10
Session 1.1
Session 2.1
Session 3
guru for non tech [shane]
Pre-booked for Lucy Hunt workshop
14.40
Session 1.2
Session 2.2
probably should have a break at some point
15.40
Session 1.3
Session 2.3

Peer-led organisational learning

Continuous Learning Lead

- Collaborates with Delivery to identify organisational learning needs
- Defines loose themes for AK Days
- Communicates needs & themes to AK Day team

Individual with an idea

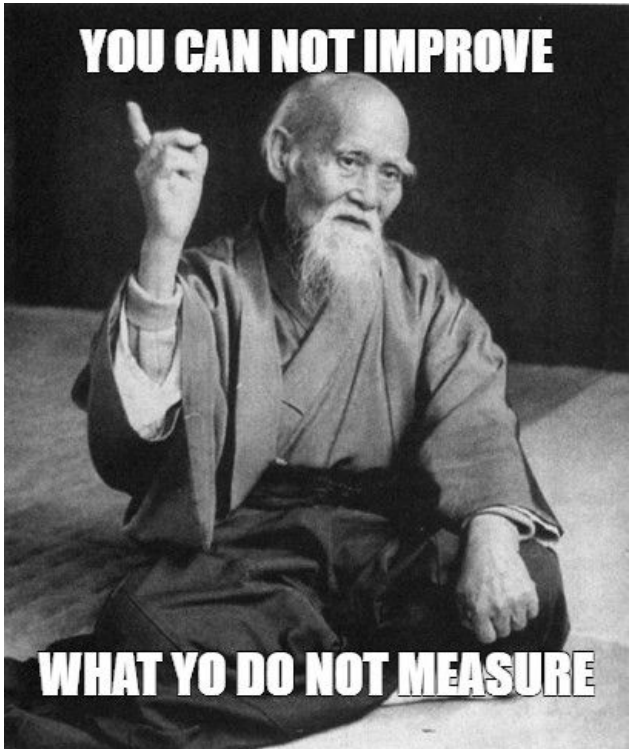


Seeks buy-in from team

AK Day Team

Plans & delivers AK Day

Does it work?



How to spot a culture of continuous learning

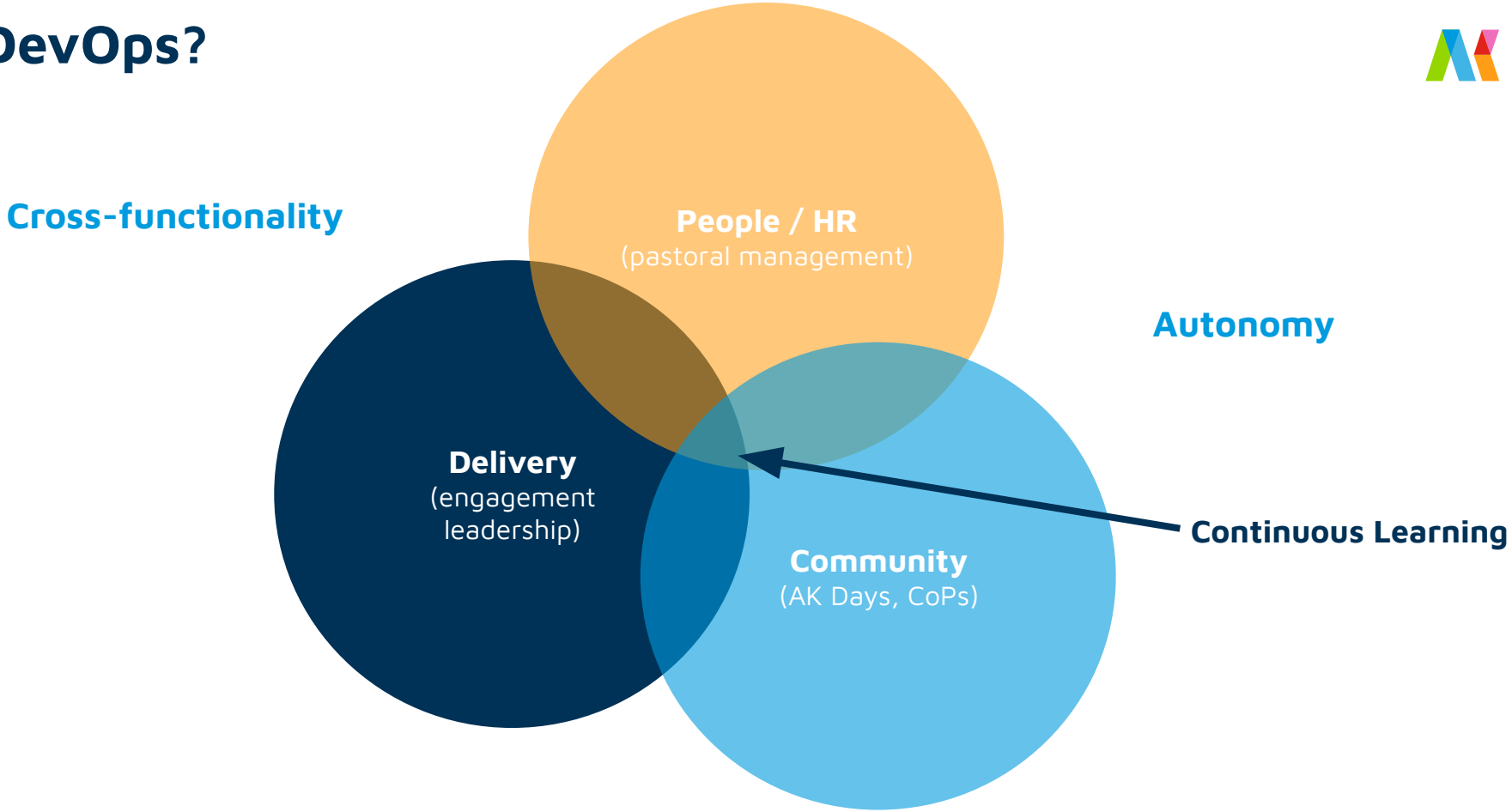
Measure it?
(surveys, skills assessments)

Talk to people?
(interviews, focus groups etc.)

Observe them in the field?
(ethnography)

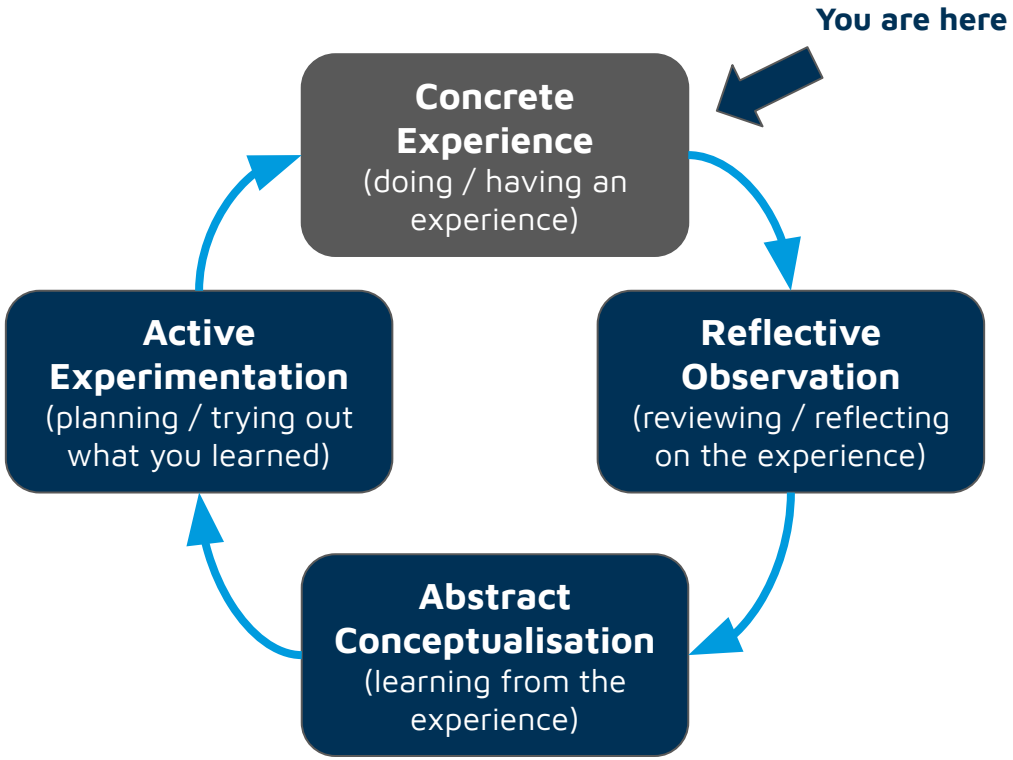
S Harriet (2021) *How can we evaluate learning culture?* Medium

DevOps?

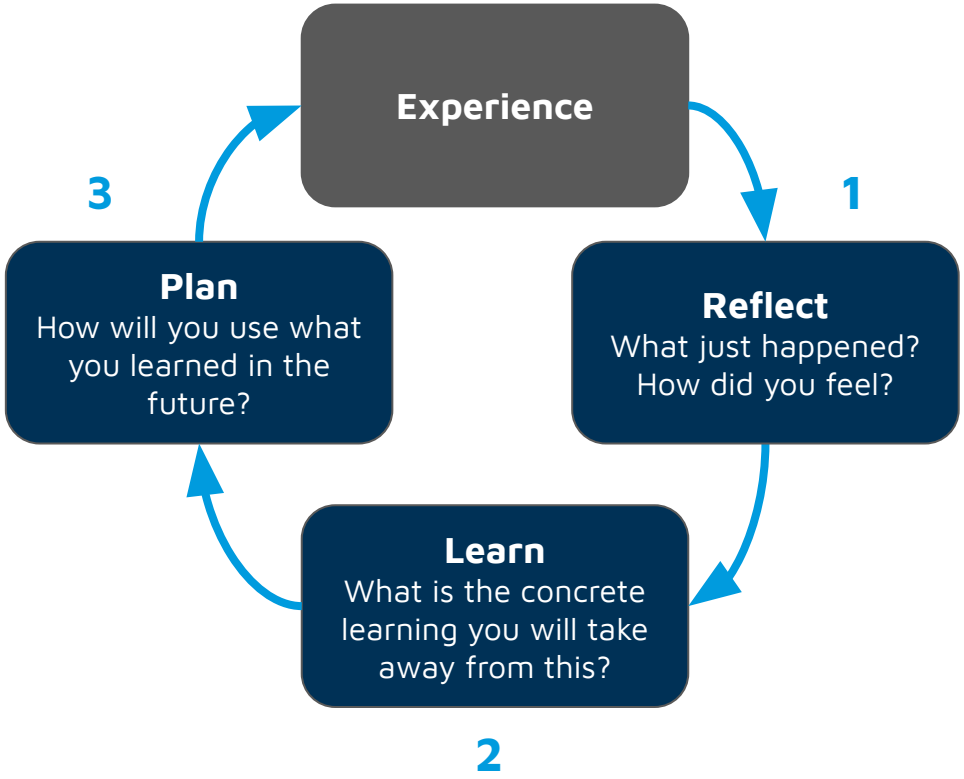

Cross-functionality
People / HR
(pastoral management)
Autonomy
Delivery
(engagement
leadership)
Continuous Learning
Community
(AK Days, CoPs)

Where we've been…

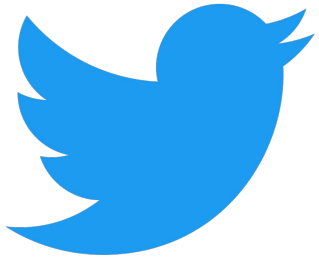
Where to next?



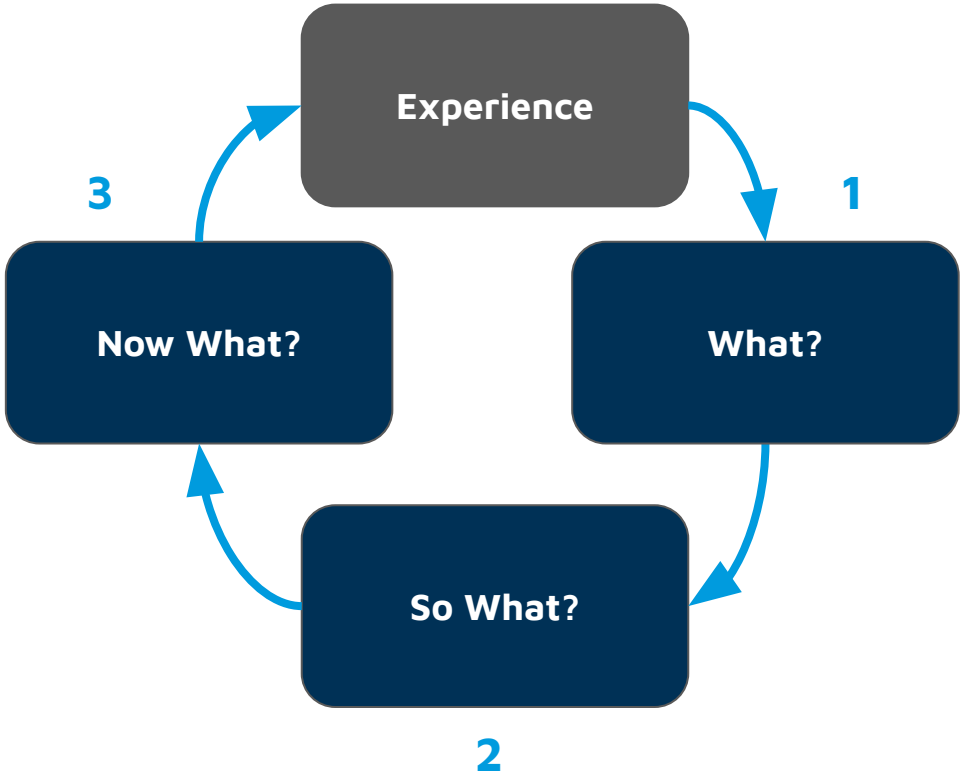
Close the learning cycle



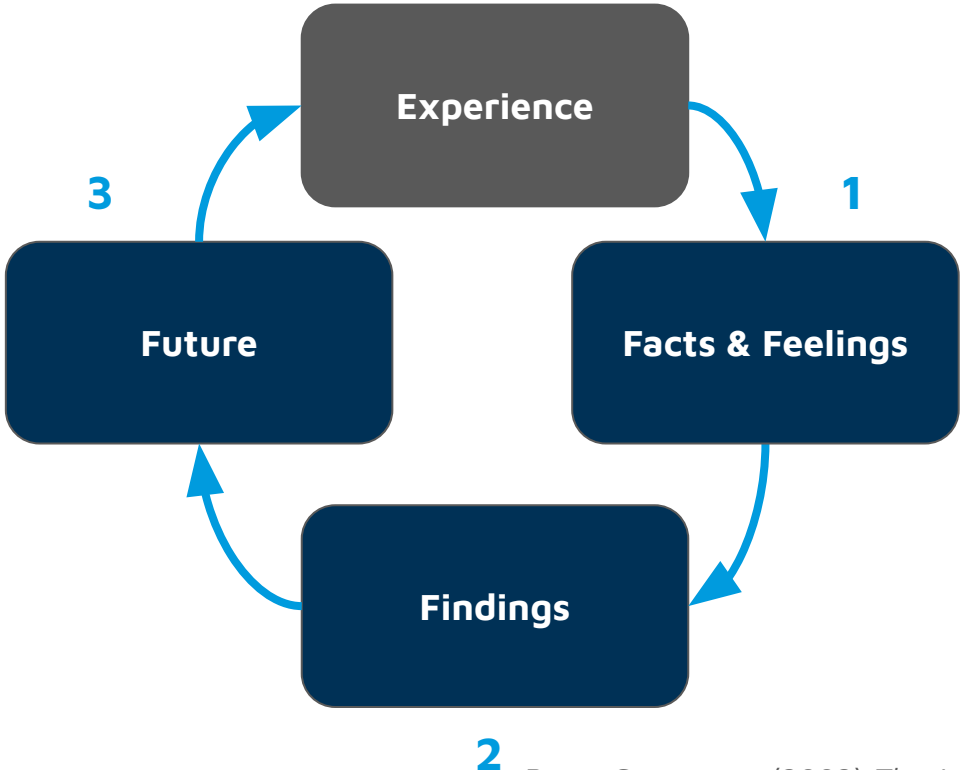
“ Today I learned [INSERT LEARNING] ”
@ArmakuniHQ #LeadDevBerlin



Over to you…



Over to you…



Roger Greenaway (2002) *The Active Reviewing Cycle*. reviewing.co.uk

Thank you for listening!

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