Hardware Development and its Challenges for Business Agility

Christian Fredriksson
christian.fredriksson@getability.se

Enabling Organisational Abilities
to be able to Thrive in a Complex World

Go to **www.menti.com** and use the code **2644 4055**

Are you (or have you been) in a development organisation transitioning to agile or lean product development?

Mentimeter

0
Digital

0
Physical

0
Cyberphysical

0
No

Business Agility

GETABILITY

Performance Dimensions

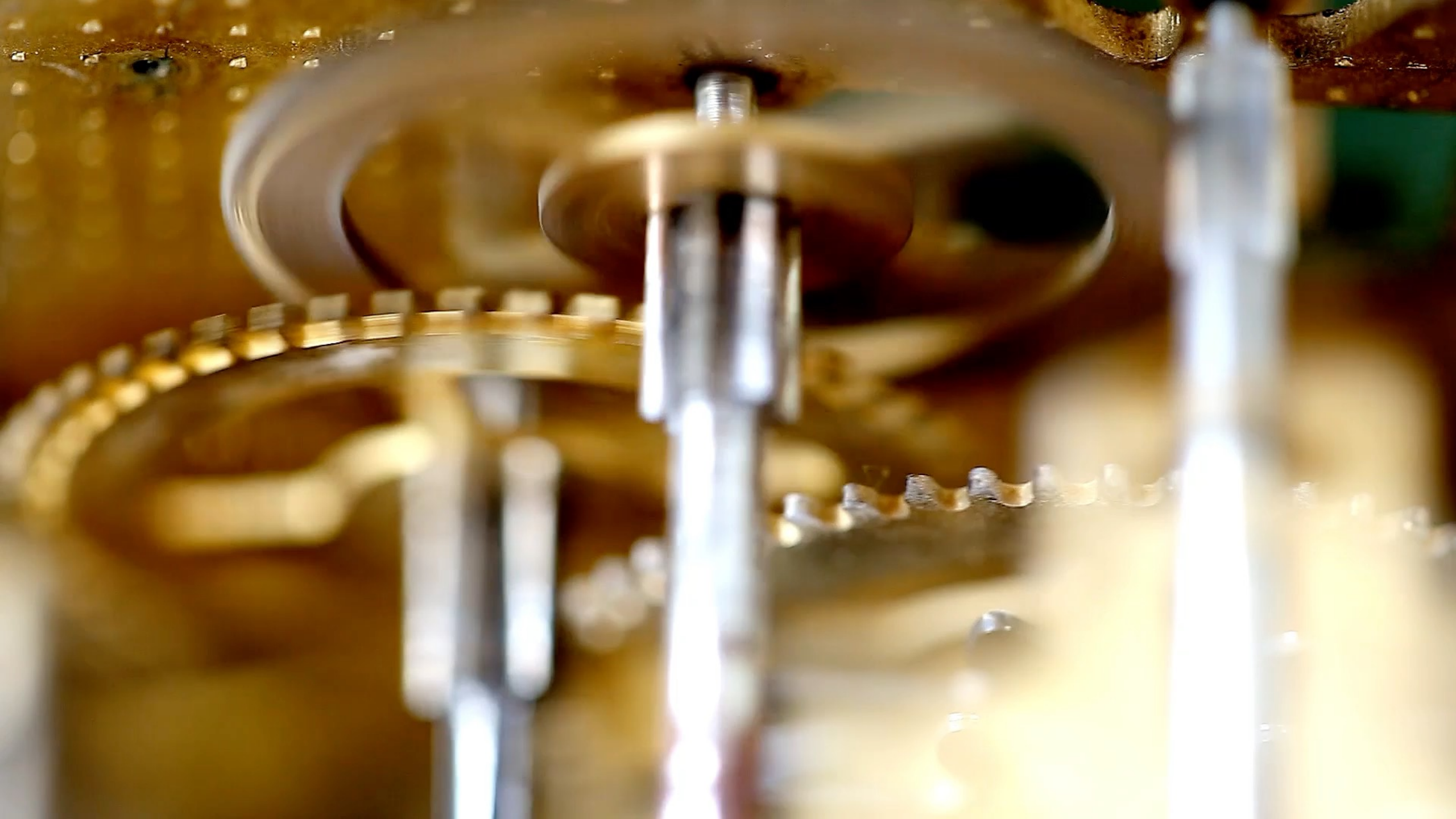
Enabling Dimensions	Value / Effectiveness	Flow	Co-creation & Sensemaking	Learning
	Making sure that what is done is creating the most possible value that is also sustainable over time.	*Optimizing for flow to reduce waiting time, get quicker feedback and increase the flow of value.*	*The ability for people to make sense of their context and bring it into purposeful collective action that avoids sub-optimization.*	*Working empirically to validate hypotheses, generate knowledge, see problems early and continuously improve.*
Technology/Process				
People				
Organisational Design				
Leadership				
External relations				

What abilities do we need to perform in a complex world and how can we enable it?

Christian Fredriksson, Getability AB, www.getability.se

This work is licensed under the Creative Commons Attribution-NoDerivatives 4.0 International License. To view a copy of this license, visit http://creativecommons.org/licenses/by-nd/4.0/ or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

Agile & Hardware



Go to **www.menti.com** and use the code **2644 4055**

What were the main challenges in the transition to agile or lean product development?

Mentimeter

The engineering perspective

- Engineering as a mature craft and discipline
- Individual responsibility
- Agile methods are carried over from SW

Dependencies

- Functional departments so much stronger
- Purchasing, Quality etc.
- Lead times
- Goals and (mis)alignment
- Dealing with complexity

ARGO
GOLD MINE & MILL

Understanding the challenges

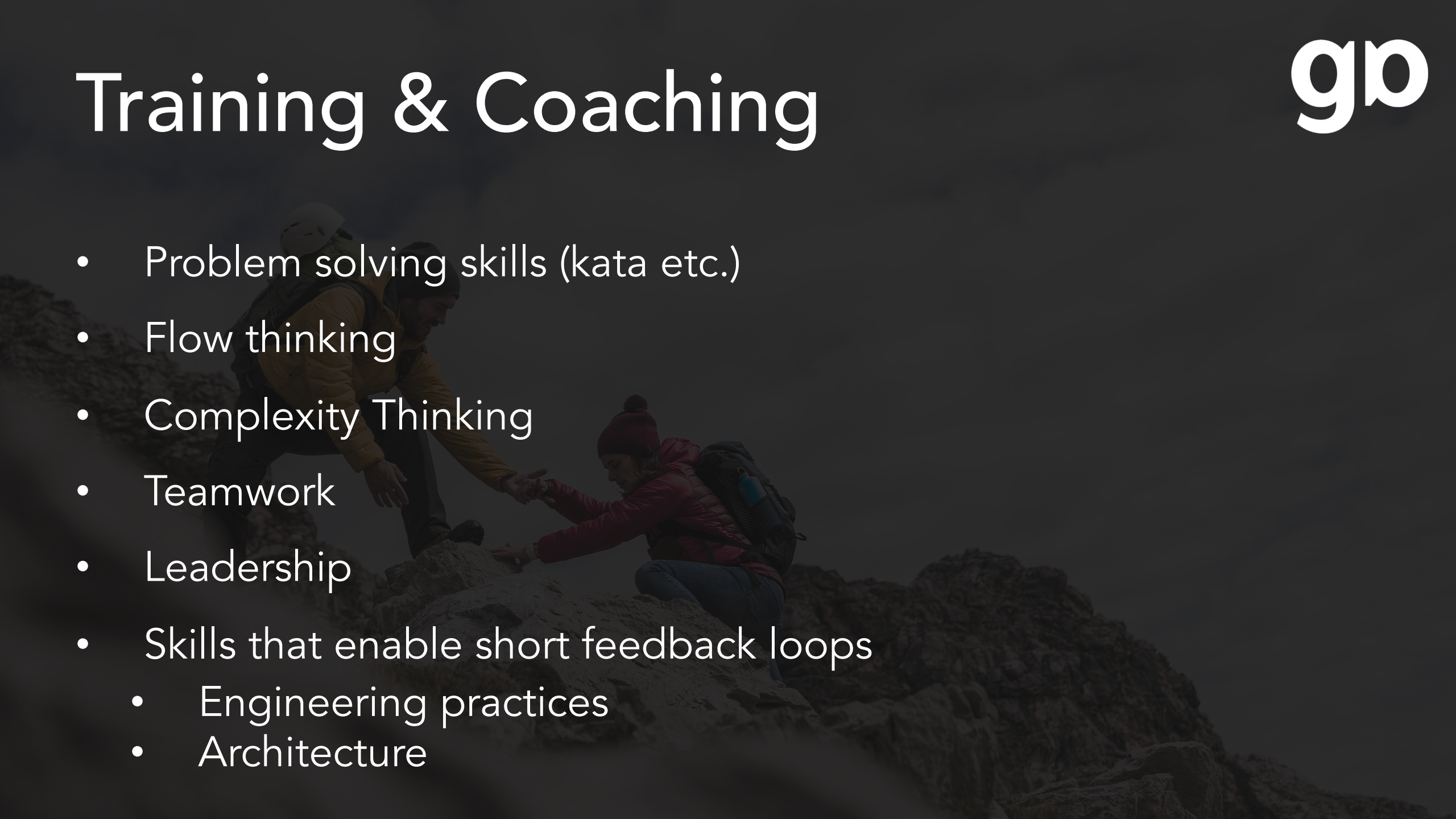
- HW later on the change curve
- Getting stuck in roles, processes and structures
- Is there a real rationale to change?
- Current paradigm too strong?

How do we Change?

Understanding where we are

People

Training & Coaching

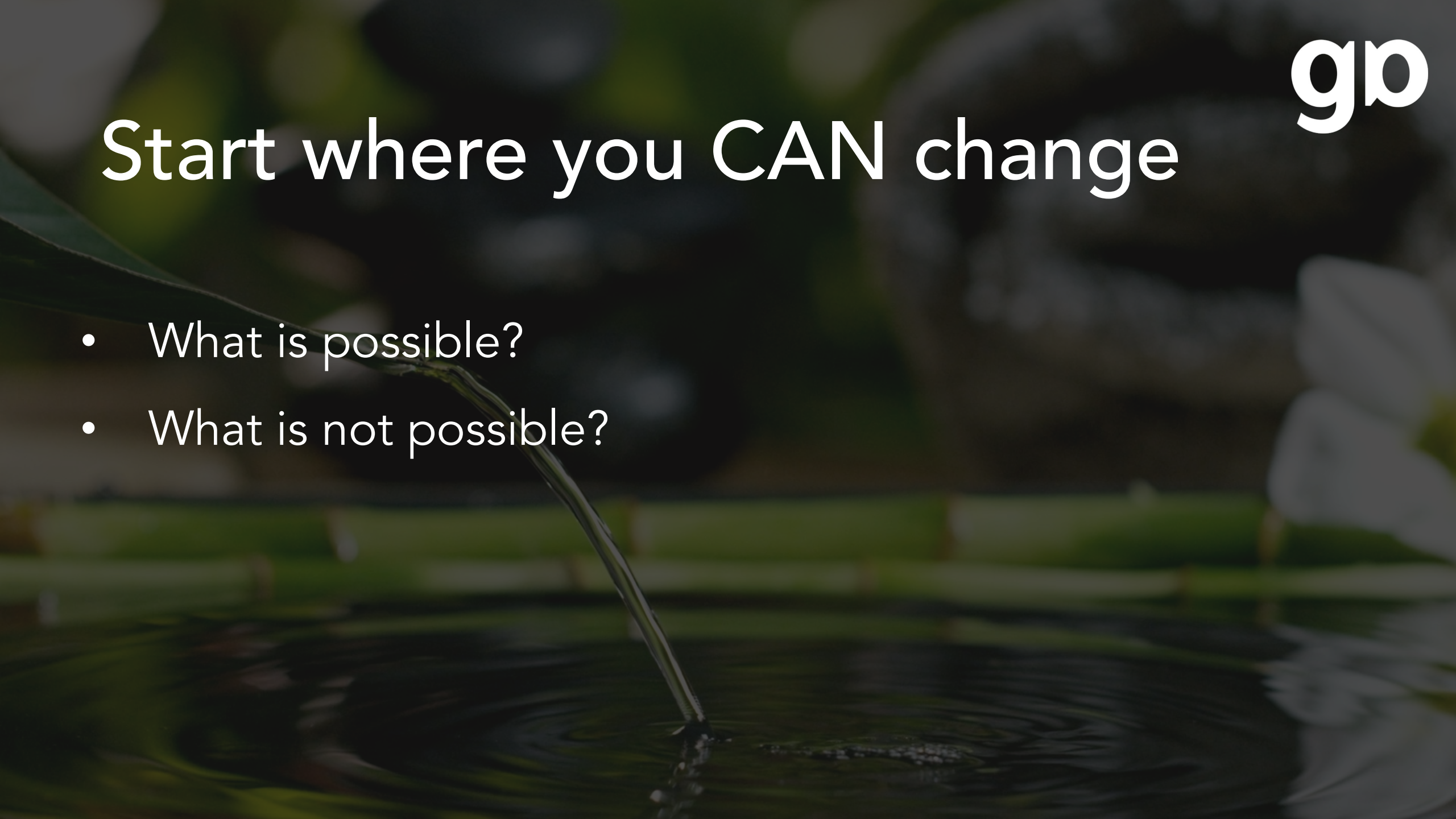


- Problem solving skills (kata etc.)
- Flow thinking
- Complexity Thinking
- Teamwork
- Leadership
- Skills that enable short feedback loops
  - Engineering practices
  - Architecture

Network building

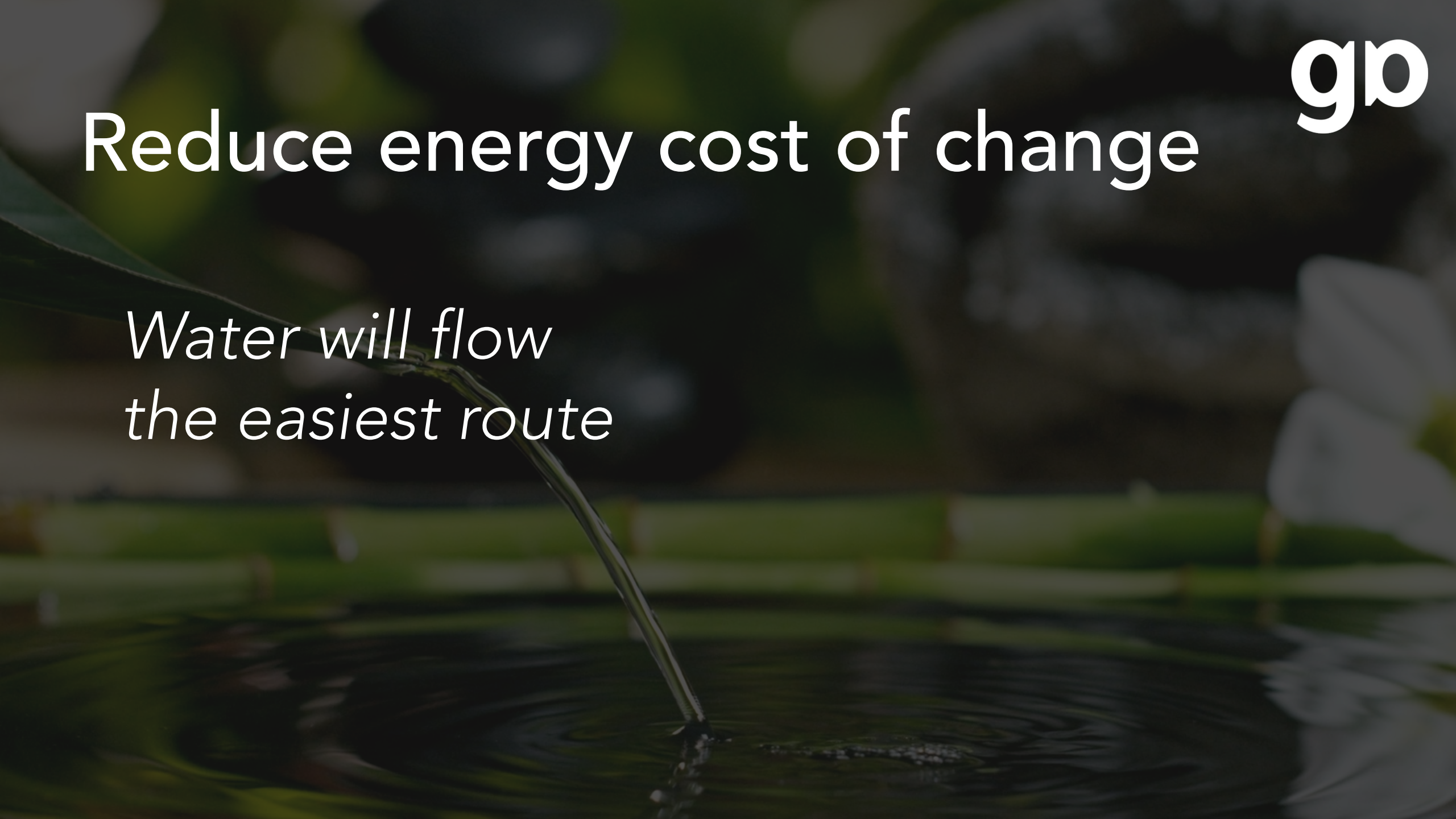
- Beware of new silos
- Incentives for collaboration and networking
- Informal
- Knowledge sharing
- New perspectives
- Innovation - repurposing
- Resilience
- Sensemaking

Environment



Start where you CAN change

- What is possible?
- What is not possible?



Reduce energy cost of change

Water will flow
the easiest route

Timing

- How strong is the dominant paradigm?
- Switch when the new paradigm can win
- Make the switch the easiest route

People + Environment

Change can occur when our new abilities can thrive to become an evolutionary advantage in the environment we are in.

Summary

- A different perspective change
- Don’t fight the old paradigm too hard
- Let people develop enabling skills
- Build informal networks
- Nurture the environment
- Make the switch easy when time is right

Christian Fredriksson

christian.fredriksson@getability.se

Enabling Organisational Abilities
to be able to Thrive in a Complex World