

# Leadership Models in Nature

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## **3.3 | Leadership Models in Nature**

Kelsey Nelsen | 02.06.2022

SD-6750-20-W22 | Creative Leadership

# Hierarchy

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Image Source: [Lesley University](#)

# Hierarchical Leadership

## OVERVIEW

Hierarchical Leadership is what we often see in a corporate or manufacturing settings. There is a chain of command that begins with CEO's, Executives, Management, all the way down to Line Workers and Contractors or Temps.

This leadership as a status is also observed in nature, take wolves for example. A wolf pack is usually led by the Alpha whose role is in decision-making and performance. This wolf can also be replaced if they do not perform well.



Image Source: (Left) Milo Weiler, (Right) Eva Blue via Unsplash

Wolves in the Wild - 1:32-2:09

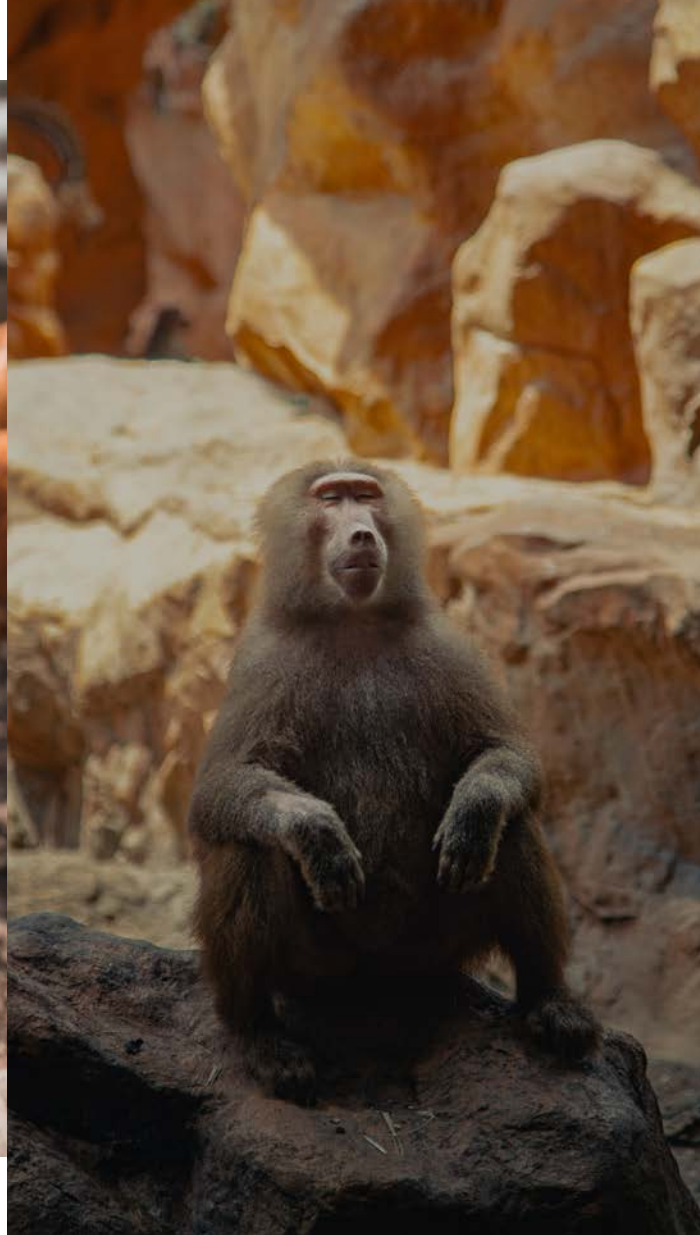




Image Source: Jean Wimmerlin via Unsplash

“Most texts focus on leadership within organizations and businesses that are hierarchical in structure where the leader is recognized and legitimized with positional power and focused on simple quantitative measures of success – i.e. profit, productivity etc.”<sup>1</sup>

# Hierarchical Leadership



Other animal groups known to have hierarchical systems: birds (notably chickens), baboons, & horses.



Image Source: (Left) William Moreland, (Center) Benjamin Ong, (Right) Christine Mendoza via Unsplash

# Swarm

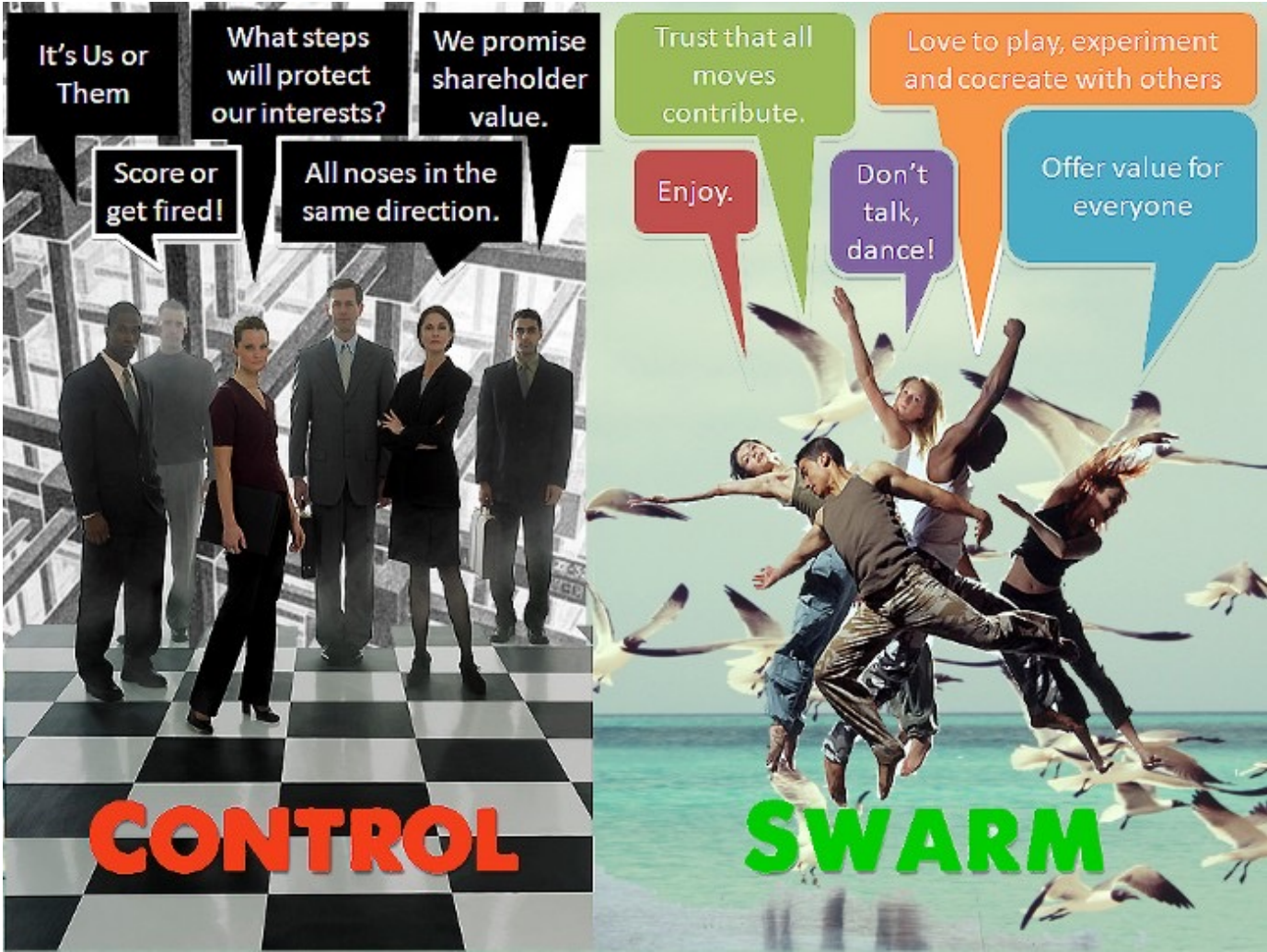
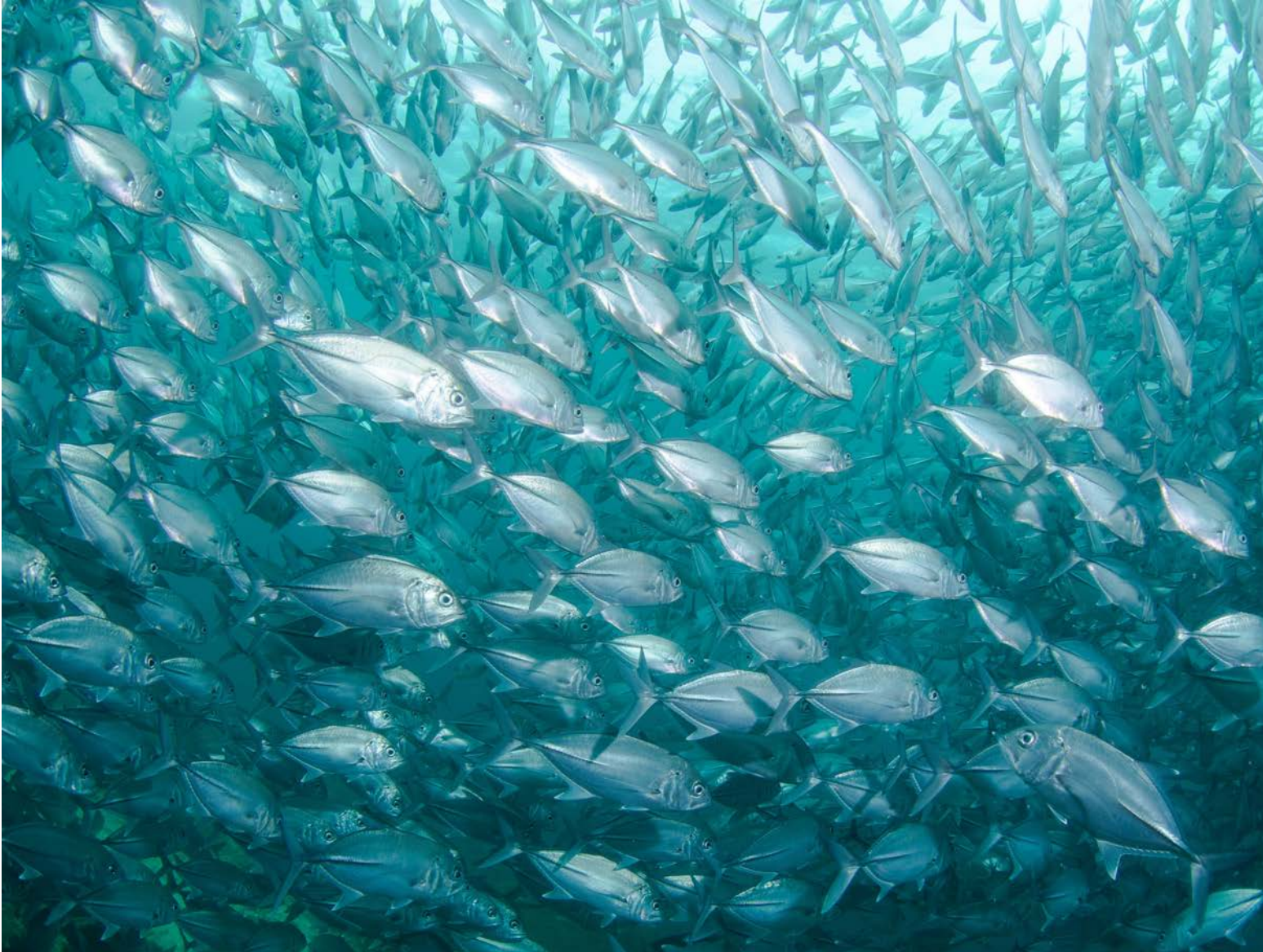


Image Source: Hierarchy vs. Swarm Leadership via [Medium.com](https://www.medium.com)

# Swarm Leadership



## OVERVIEW

Leadership takes many forms in nature, one of which is a **swarm**. These groups are motivated by independent survival, but it's the group that allows for this success. Moving in a swarm provides protection and improves the survival of the entire system.

Image Source: Jean Wimmerlin via Unsplash



# Epic Journey of Sardines



Image Source: Jean Wimmerlin via Unsplash

# Swarm Leadership



Image Source: (Left) James Wainscoat, (Right) Joshua J. Cotten via Unsplash

“whatever the organism does to benefit itself also benefits the system, and by working to benefit the system it also benefits itself.”<sup>2</sup>

# Starlings in Flight



# Swarm of Monarch Butterflies



# Swarm Leadership



Other groups in nature known to have swarm systems: insects, herd mammals & bacteria.

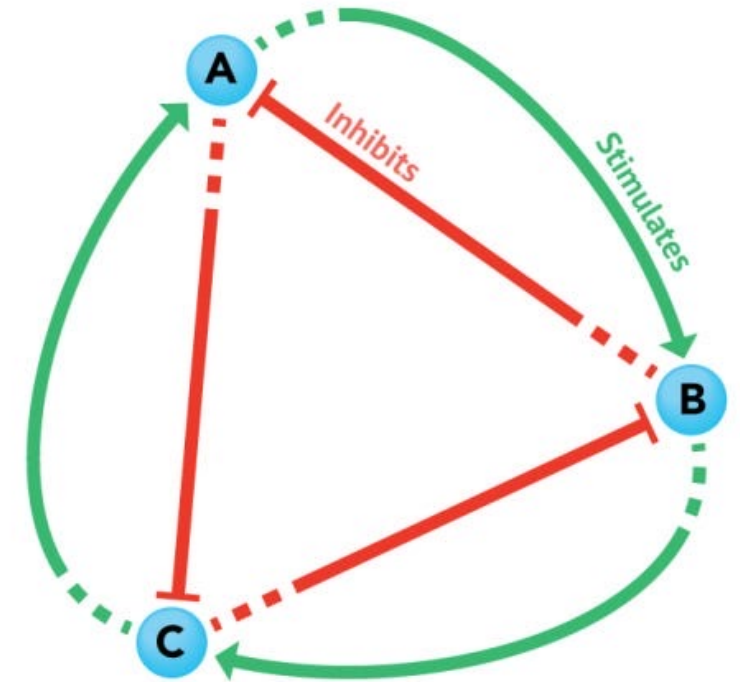


Image Source: (Left) Edgar Chaparro, (Center) CDC, (Right) Lisa H via Unsplash

# Heterarchy

## A HETERARCHICAL SYSTEM

In a heterarchy, as opposed to a hierarchy, there is no "top" or "bottom" ranking. However, unlike in an anarchy, there is superiority and inferiority as each element is activated in some circumstances and inhibited in others.



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Image Source: [Forbes.com](http://Forbes.com)

# Heterarchical Leadership

## OVERVIEW

Within a **heterarchical** structure, there is no single leader, instead a position of leadership fluctuates between the members of a group. The group becomes a support system of the leader(s) and encourages them along the way. Just like we see with geese taking a flying V formation.

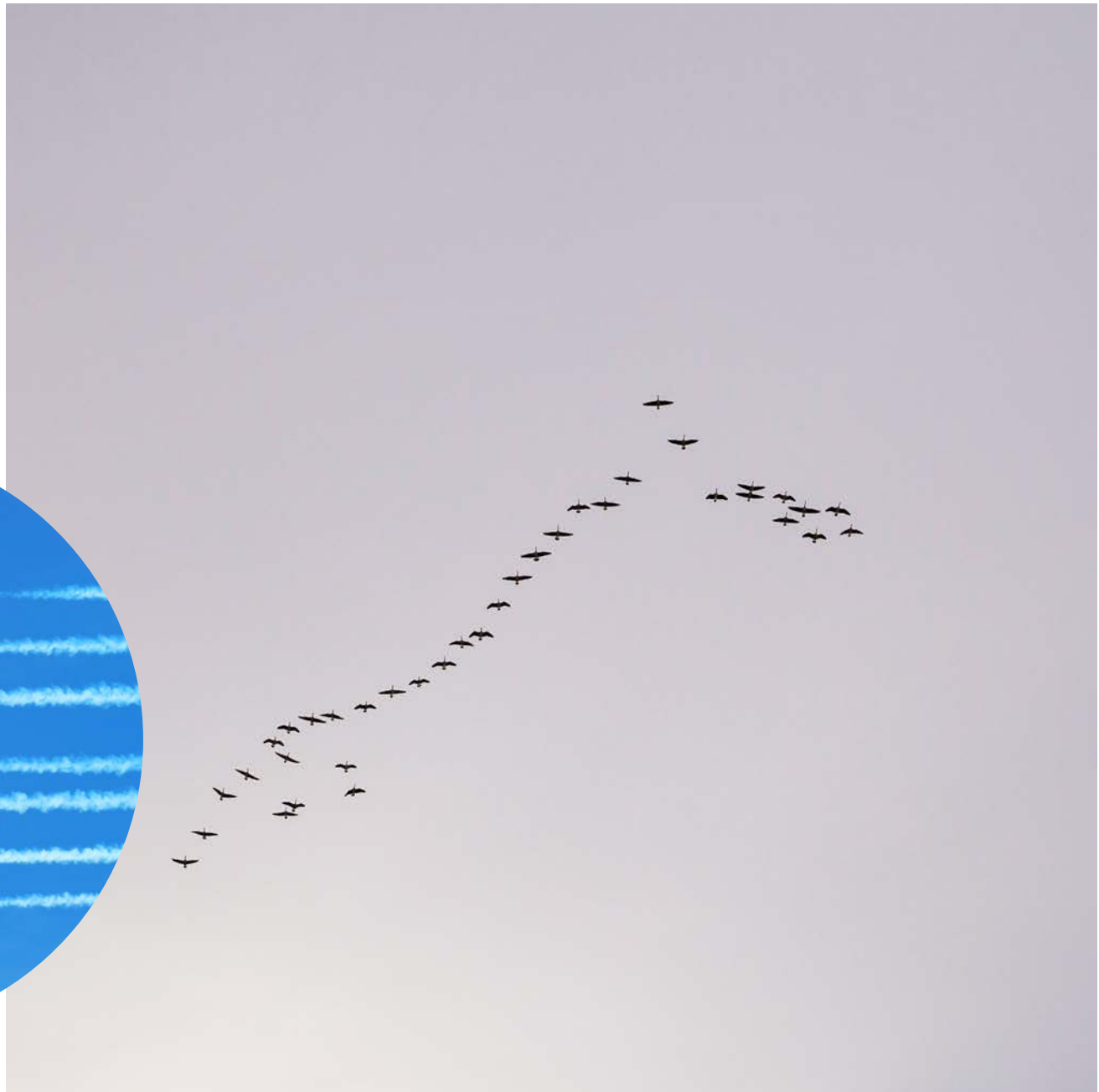


Image Source: (Left) Adam Smotkin, (Right) Justin Wilkens via Unsplash

# Why Geese Fly in V-Formation





# Seeds & Sprouts

## How to grow distributed leadership

by Alanna Irving

In a pyramidal structure, leadership is concentrated at the top. But what if your organisation is more like a network, community, or ecosystem?

How does leadership without bosses grow? How can I grow as a leader if there's no ladder to climb?

### 5. Pollination: Ecosystem Leadership

Ecosystem leaders work across all these modes of leadership, and think about impact beyond their own community.

How can we create catalysts who seed new collaborative communities? How can we support network-to-network collaboration?

How can we restructure our communities, cities, and companies so everyone can lead? How can we change societal power structures? How can we give more people access to shared power? How do we coordinate collective action without flattening diversity? What are processes, structures, and ideas that create whole new levels of collective agency?

You are a mentor to others working to distribute power. Your track record of gaining consent engenders trust.

You implement systems for support, accountability, transparency, and continuous improvement that can operate without your direct involvement. You critique power on a systemic level: if the pathway to leadership isn't accessible to everyone, it means there are seeds left unspouted.

### 4. Flowering: Growing Leadership

The ultimate success is growing so much leadership that you make yourself obsolete.

You see that long-term success depends on constantly nurturing more leadership. You craft opportunities for people to step up, even when you think you could do it better or faster yourself. People feel safer practising leadership skills with your support.

### 3. Sprouts: Leading Others

Coordination without hierarchy is the art of facilitation.

You design and implement effective systems and processes to distribute power. You have a knack for unblocking people. You're a mentor to people learning about self-leadership.

You can see how a project fits into the big picture. You help groups delegate, communicate, and collaborate, without coercion.

You're good at building and nurturing teams, appreciating people's differences and preferences. You synthesise diverse perspectives into continuous improvement.

You facilitate ongoing critical engagement about power, and use any that accrues to you to create ways for distributing it.

### 2. The Seed: Self-Leadership

Distributed leadership begins with leading yourself.

You can identify and execute work on your own. You set good boundaries. Both your 'yes' and your 'no' are powerful, because you only make commitments you can keep. You adapt and collaborate. You know and communicate your preferred ways of working. You can weave yourself into a project usefully.

### 1. The Soil: Shared Power

You can't just declare 'There are no bosses,' and expect everyone to 'self-organise'. Hidden hierarchies will emerge and distributed leadership will die on the vine.

Power doesn't just come from positional authority, like a job title. It accrues to people for a lot of reasons, like founder status, communication style, gender, age, and skills. Power dynamics will always exist. What's important is how a group deals with power.

If the culture is hostile to questioning power, co-leadership can't flourish. To have an effective critique of power, everyone needs a voice. In the absence of an explicit hierarchy, those with power have a responsibility to recognise that and proactively distribute it.

### Harvest: Growing Understanding

In a collaborative environment, we're moving around each other constantly—giving and taking, leading and following.

- If someone tried to step into leadership here, is there room for them to grow?
- What power am I holding? Can I distribute it?
- Am I taking care of myself? Do I have self-awareness? What do I need to learn?
- In a given situation, do I want to work on my own, collaborate, follow, or lead? Can I see how to make my most valuable contribution?
- Am I creating opportunities for other to do their best work?
- Who is showing leadership around me? Am I noticing it and learning from it?
- Do I know when to step in, and when to step back?
- Am I building systems that don't depend on me directly?
- Am I thinking long term about growing leadership in my environment?
- Am I contributing to the wider discourse about leadership evolution?

Image Source: [Medium.com](https://medium.com)



## OVERVIEW

Through **seeds and sprouts** we see the continuous cycle of new growth combined with old growth within a forest ecosystem. The evolution in these ecosystems ensures their survival; adaptability and agility, with deep roots systems allow them to prosper.



Image Source: (Left) Ronny Navarro, (Right) Francesco Gallarotti via Unsplash

# Bean Sprout Time-Lapse



## Seeds & Sprouts Leadership



Image Source: Sebastian Unrau via Unsplash

“By maintaining constant cycling at different locations and at different scales of time and size, the forest is able to survive and leverage short term disturbances as well as long term change.”<sup>4</sup>

# The Secret Physics of Dandelion Seeds



# Adapting Leadership in Nature to Business

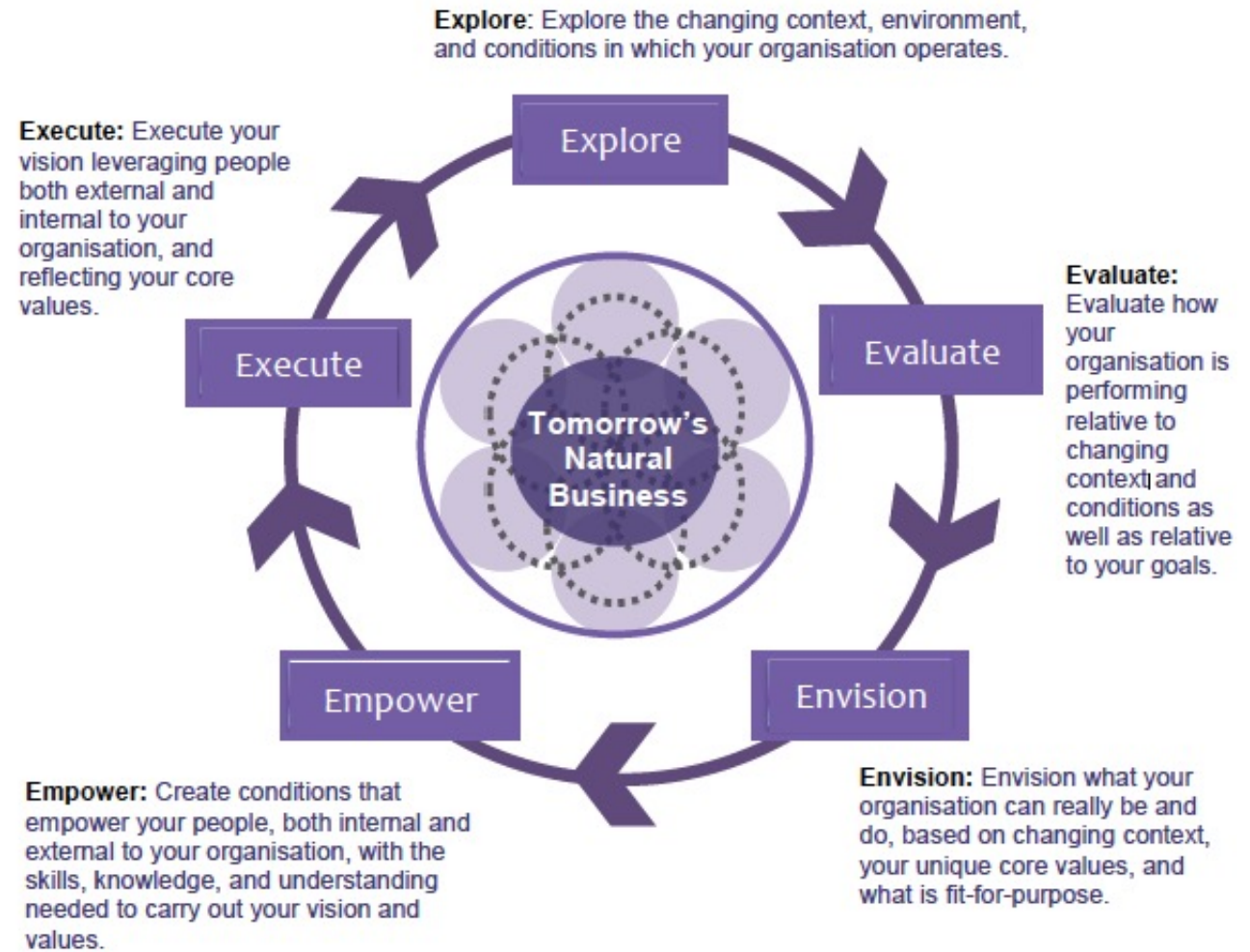


Image Source: Tomorrow's Natural Business, Manwaring, DeLuca, & Hutchins

# Cooperation



Image Source: James Lee via Unsplash

# Cooperation

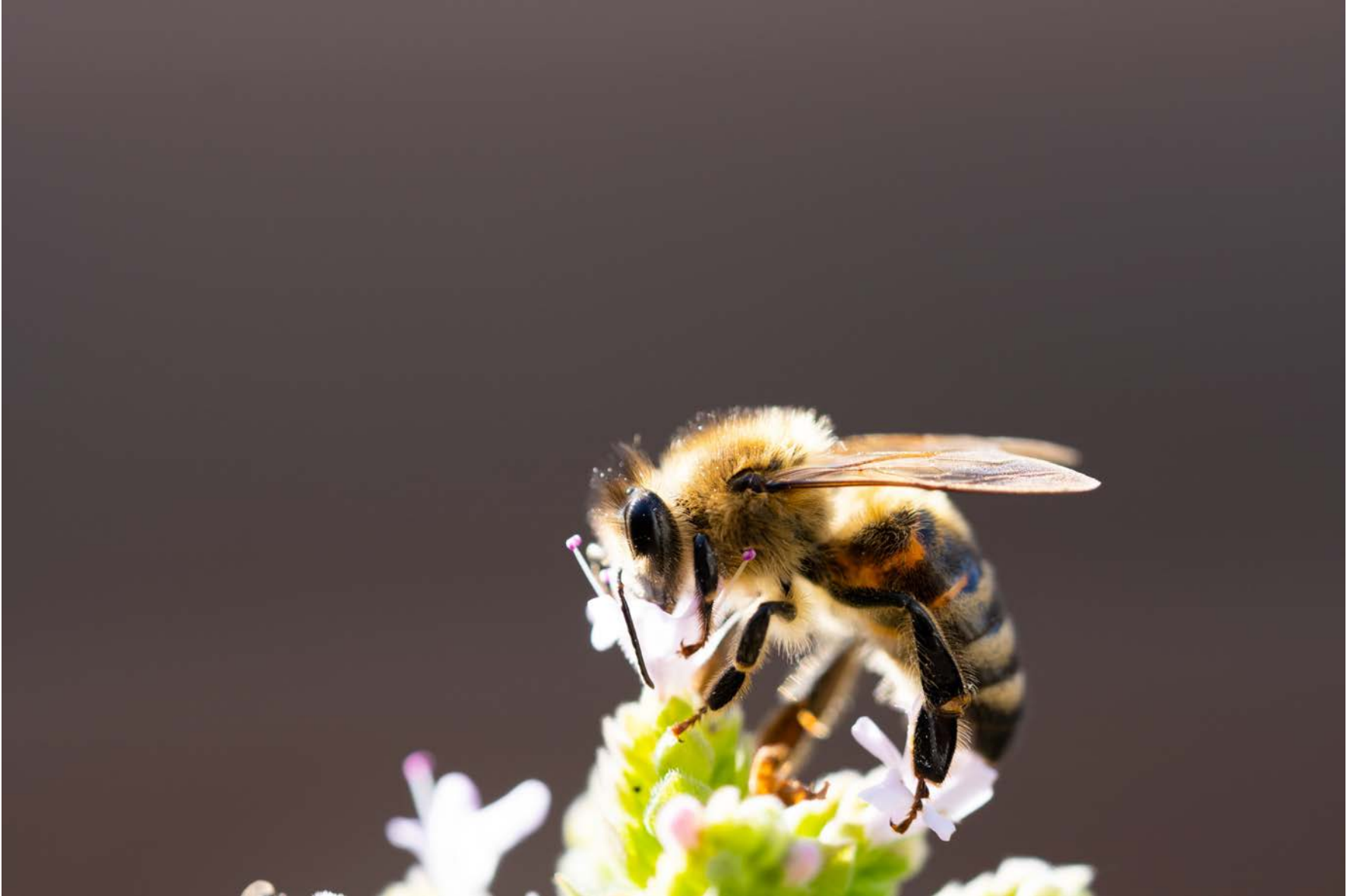


Image Source: Kris Mikael-Krister via Unsplash



# Cooperation



Image Source: Simon Hurry via Unsplash

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3. Ibid.
4. Ibid.

Thank you.

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