



Weak Signals a micro-introduction

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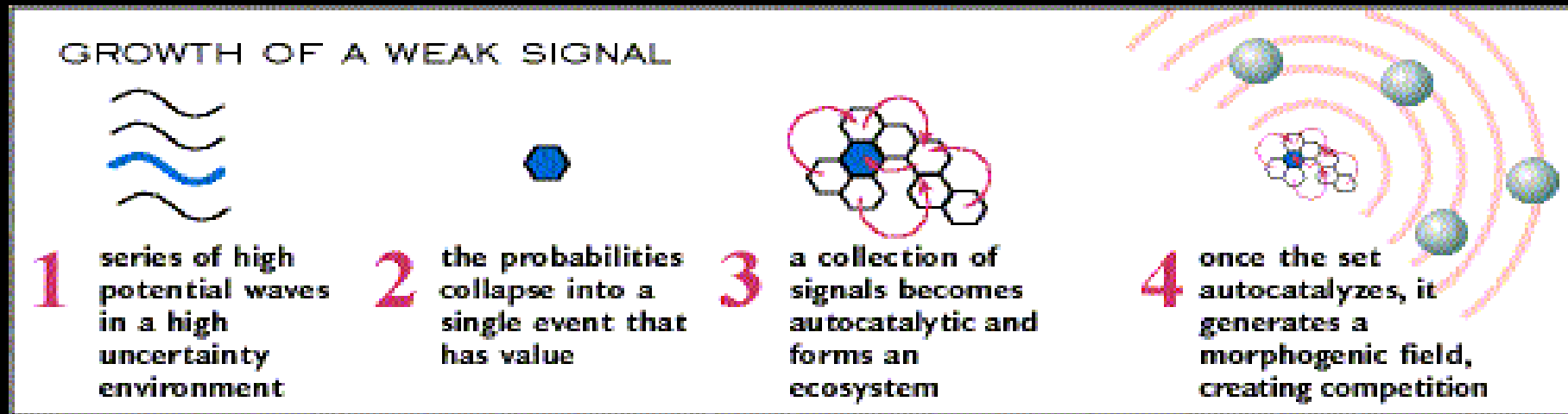
In foresight we work with
**complexity, ambiguity, uncertainty,
volatility**

What you see in this environment, may
come to your organization.

Weak Signals are early signs of currently small change, *'hints'* seeds of change, *'seems random or disconnected'*.

The search for weak signals involves identifying *"not necessarily important things"*

They could be the trigger for major events in the future.

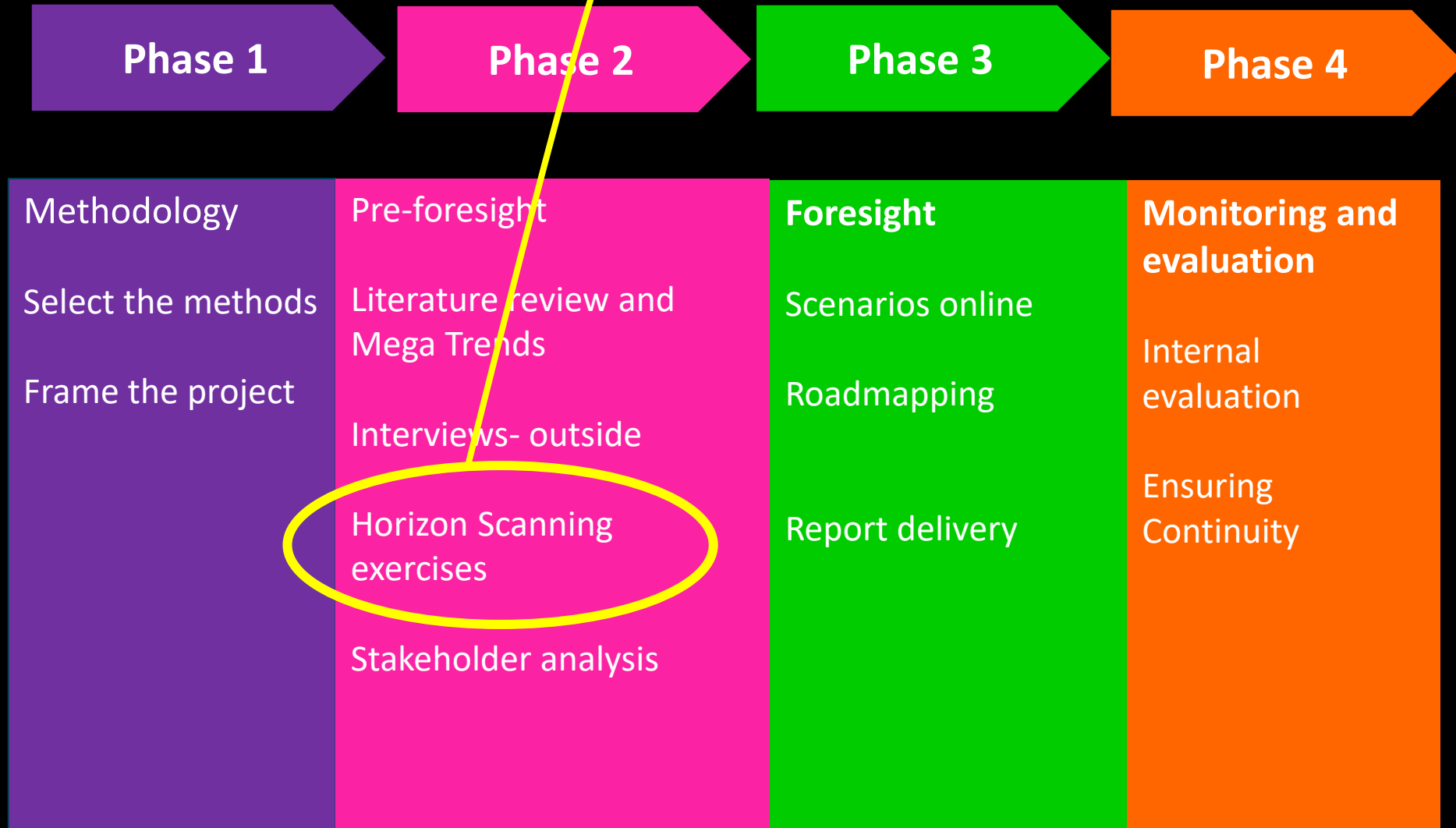


(iKnowfutures.eu, Coffman 1997)

A weak signal is the first indicator of a change or an **emerging issue that may become significant in the future.** Weak signals are often identified as a part of horizon scanning. 'WS' supplement trend analysis and can be used as a foundation for defining wild cards.

SITRA

Scanning for “Weak Signals” is part of the Horizon Scanning process



Characteristics

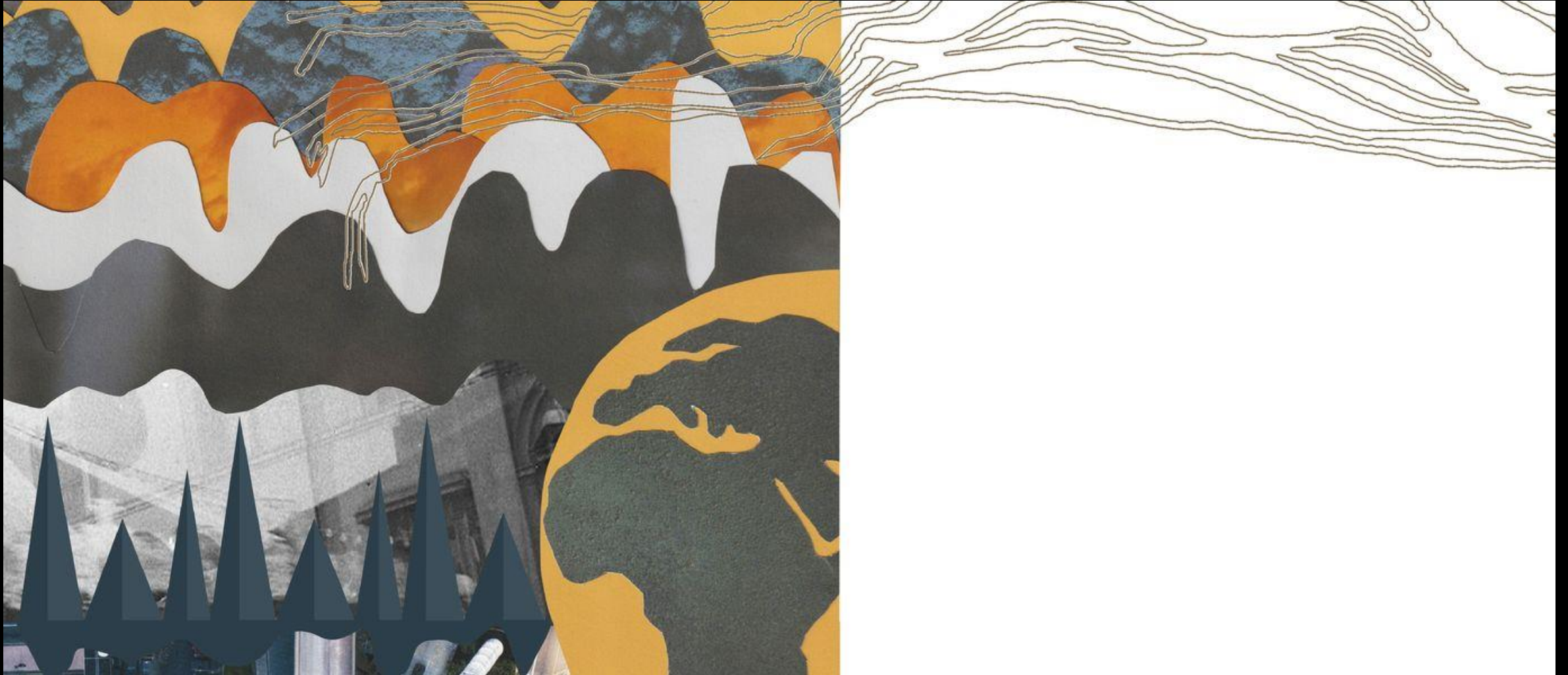
- Novelty:** a weak signal is an indicator of something new or a new perspective on a known subject.
- Surprising:** a weak signal is surprising to its interpreter.
- Challenging:** a weak signal forces one to challenge existing assumptions and is therefore often difficult to detect or easy to overlook.
- Significance:** a weak signal describes something that may have an impact on the future.
- Delay:** a weak signal describes something that is not yet significant but requires time to mature.

Dufva (2019) What is a weak signal? SITRA. Articles

Examples

Weak signals bring messages from the future

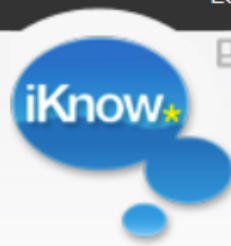
Weak signals help us see the present more precisely and build better futures



(Aalto University 2020) News. <https://www.aalto.fi/en/news/weak-signals-bring-messages-from-the-future>

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WE general



Migration reform aimed to grant Cuban nationals the right to go out of the country

migration, mobility, USA, Venezuela, Cuba, reform, Latin America


WE general **2005-now**



lipstick entrepreneurs

women, own business, enterprises

WE general **before 2000**



Rise in Vegetarianism and Veganism

vegetarianism, development, Animals, evolution, veganism, empathy, reason





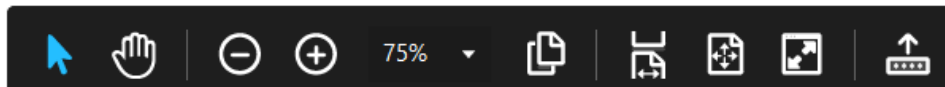
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JRC TECHNICAL REPORTS

Weak signals in Science and Technologies 2019

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*Technologies at a very early
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Transportation Research Procedia 19 (2016) 18 – 32

Transportation
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International Scientific Conference on Mobility and Transport Transforming Urban Mobility,
mobil.TUM 2016, 6-7 June 2016, Munich, Germany

From weak signals to mobility scenarios: A prospective study of France in 2050

Vincent Kaufmann, Emmanuel Ravalet *

Laboratory of Urban Sociology, EPFL, batiment BP, Station 16, CH-1015 Lausanne, Switzerland

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Article in *Futures* · January 2012

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COVID-19

Weak Signals from Paris

On May 11th, after 55 days under some of the strictest COVID restrictions in Europe, French society began to crack its shutters. By the time ReD research partner Rayan Hindi conducted a week-long research sprint in Paris in mid-June, the city was pulsing again. Restaurants, cafés, and shops had been fully reopened, with only a subset requiring masks indoors. Public parks and the banks of the Seine were packed with Parisians eager to gather after months of restricted mobility and in-person socialization. Protesters took to the streets to echo racial justice protests in the US, and to demand better wages and conditions for France's essential healthcare workers. It was almost as if COVID had never happened.

...*Almost*. Paris now looks like a version of what an April piece in *The Economist* called a 90% economy: Much of pre-COVID activity has been resumed, but there are uncanny gaps — an absence of tourists, for example, meaning Paris is free for the first time in centuries from the gaze of foreigners. So how has Paris changed? What can we learn from this new Paris? And what might it tell us about how brands can serve its consumers in the months and years to come?

EY: Disruption can come from anywhere, at any time. Weak signals may provide advance notice.



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on their business, customers and operations. And when certain milestones seem within sight, companies can undertake small pilots to assess viability and proof of concept. Ultimately, weak signals need to become part of every company's peripheral vision.

Here are four weak signals that could bring dramatic change and unlock significant new opportunities, thus earning their place on the radars of business and government leaders.

1. **Chapter 1: Quantum computing**
2. **Chapter 2: Brain-machine interfaces**
3. **Chapter 3: Space commercialization**
4. **Chapter 4: Transportation drones**



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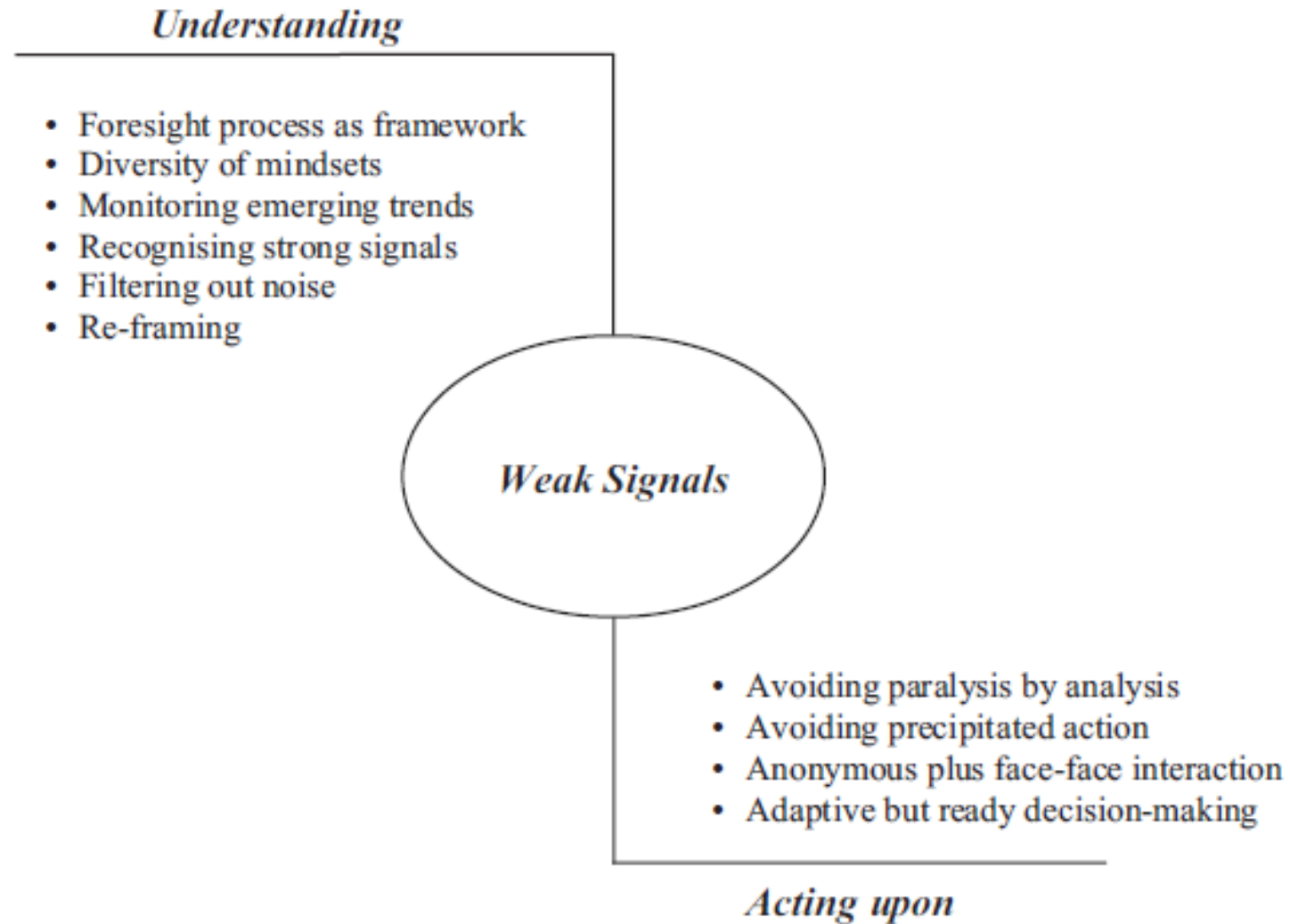


Fig. 1. Making the most of weak signals.

Key message:

- Weak Signals are part of a foresight process.

When the organization has identified them, it needs to:

(1) Try and understand what the signal may mean.

This involves monitoring how it can evolve over time.

(2) Act to minimize or maximize the possible negative or positive consequences/impacts.