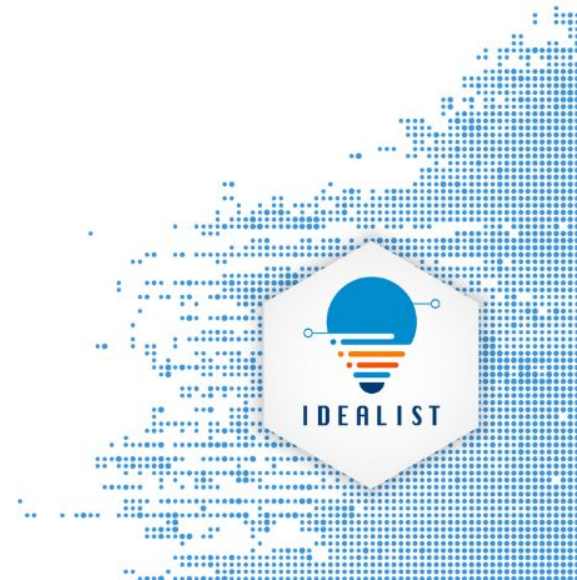# Horizon Scanning:
theory & practice

IDEALIST
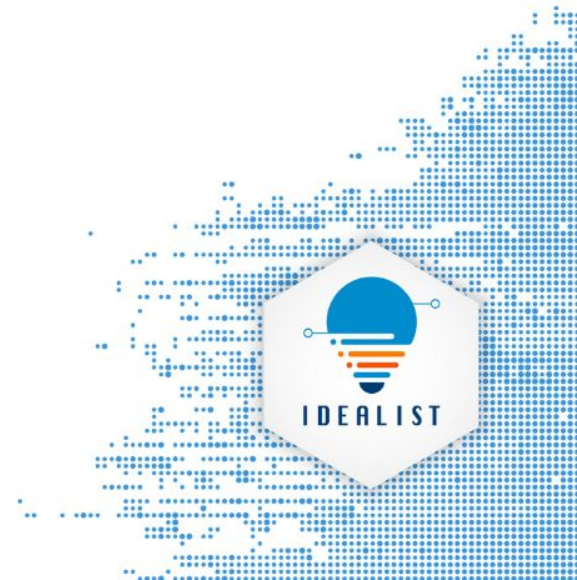
What's this?
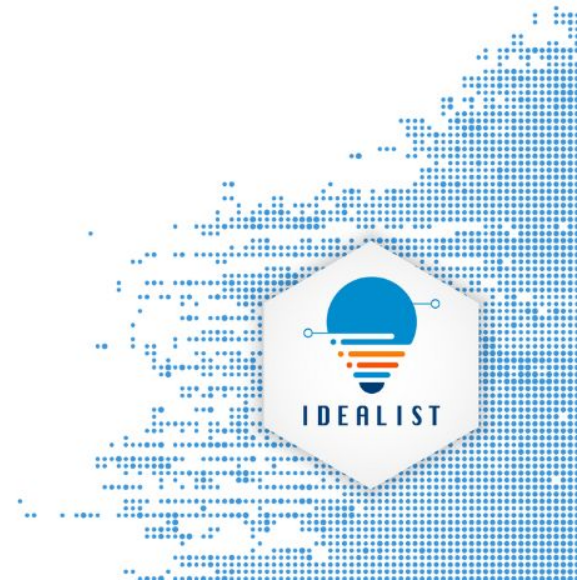
What's this?

30 years ago...

Motorola International 3200,

first digital hand-held

Introduced in 1992

½ - 1 hour talktime

IDEALIST

What's this?
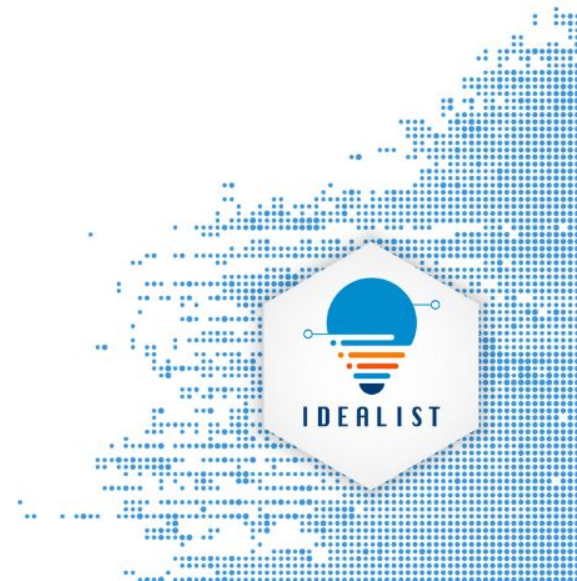
IDEALIST

What's this?

You're living in 1992.

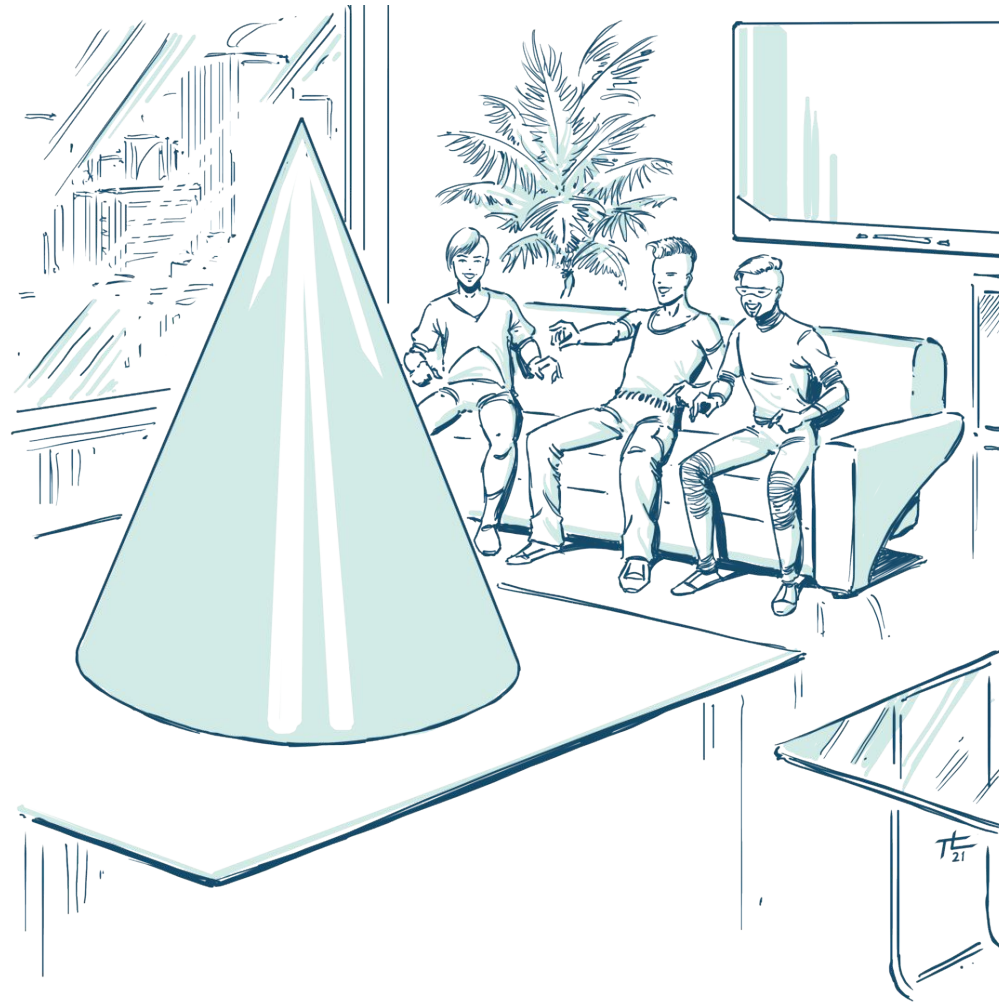Someone asks you to try to imagine that you're living 30 years into the future - in **2024**.
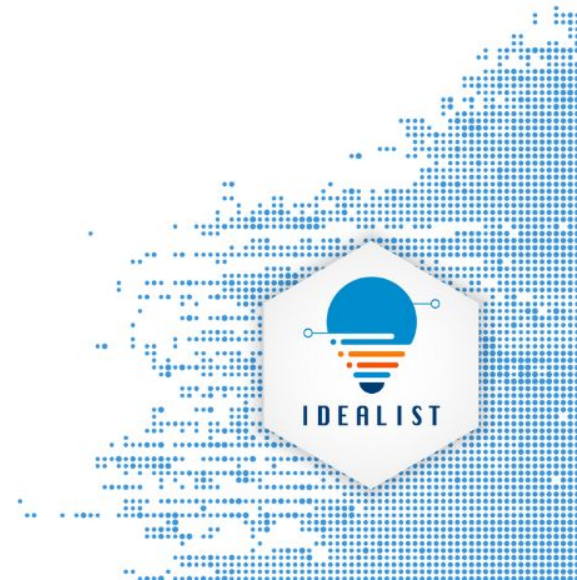
The photo shows a very common object in 2024.
What is it???

IDEALIST

What's this?
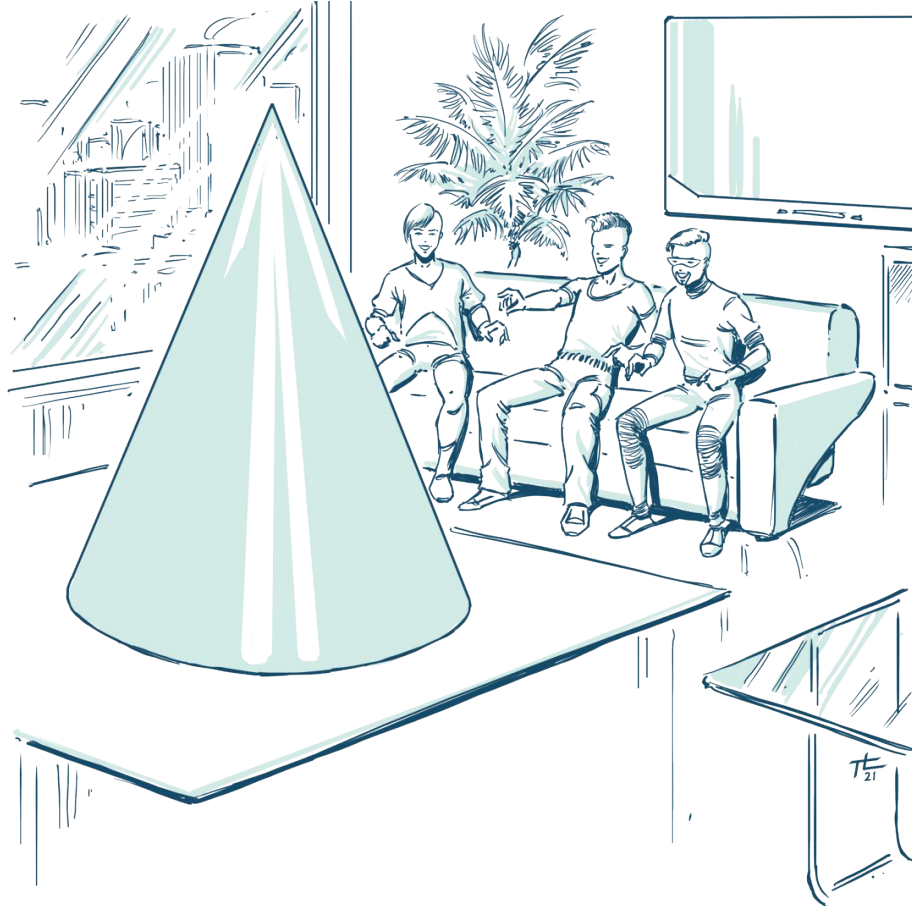
What's this?

Imagine that you're living 26 years from now, in the **2050s**.

This is a very common scene in the 2050s.

What's happening here???

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The future will be......

The future will be……
DIFFERENT

Agenda

CONTEXT:

- Goals & flow of the workshop
- HS within the IDEALIST project
  - Participants
  - Organisation of work
  - Expected results

THEORY:

- Introduction to foresight, futures literacy
- Introduction to Horizon Scanning

PRACTICE:

- Launching the group Horizon Scanning exercises

IDEALIST
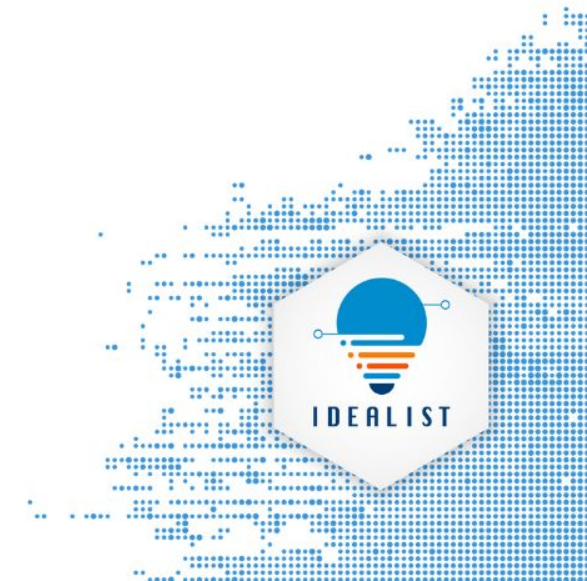
Detailed flow of the group work

10:30-11:20 **Exercise 1 UNCERTAINTIES & DRIVERS** (in groups)

10 minutes break

11:30-12:00 Report-back (plenary)

12:00-13:00 **Exercise 2 COLLECTING SIGNALS** (in groups)

60 minutes lunch break

14:00-15:50 **Exercise 3 ASSESSING SIGNALS & MAP OF DRIVERS** cont. (in groups)

10 minutes break

16:00-16:30 **Exercise 4 SENSE-MAKING** (in groups)

16:30-17:30 Report-back in plenary, summary, Q&A, Next steps, Evaluation form

CERTIFICATE!

IDEALIST

HS within IDEALIST: Expected results

- **A map of drivers and disruptors in three industrial ecosystems:**

  - Energy-intensive industries,

  - Aerospace and Defence,

  - Mobility, Transport & Automotive

- An increased understanding of the forces of changes that are shaping (local) industrial ecosystems, discerning critical or highly influential drivers from less influential ones.
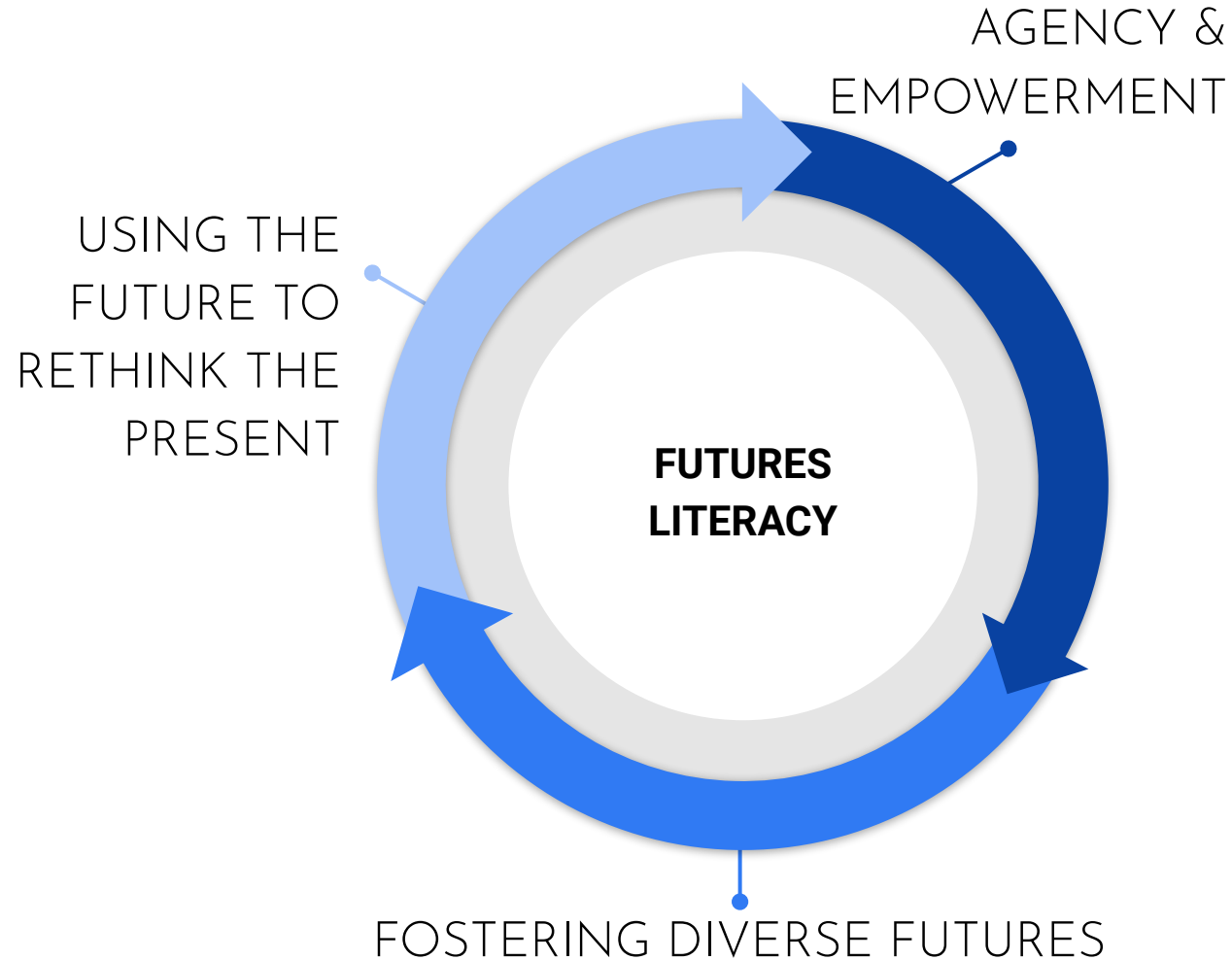
IDEALIST

Introduction to Futures Literacy and foresight

How to correctly think about the future?

- The future is **not predictable**. We are therefore forced to consider what the plausible futures are.

- The future is **not totally predetermined**. There is an infinite number of potential alternative futures, some of which may be more probable than others.

- To some extent, **future can be shaped** by our choices in the present. Even though we cannot determine which of the infinite possibilities for a future will eventuate, we can influence the probability of a certain outcome with our choices (both actions and indications) in the present.

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Futures Literacy skill

AGENCY & EMPOWERMENT

USING THE FUTURE TO RETHINK THE PRESENT

FUTURES LITERACY

FOSTERING DIVERSE FUTURES

- **Futures Literacy** is a competency that allows people to better understand the role of the future in what they see and do.

- It is an individual skill, which can be enhanced in the methodological process, known as **foresight**.

- A Futures Literate person does not have the ability to predict the future

IDEALIST
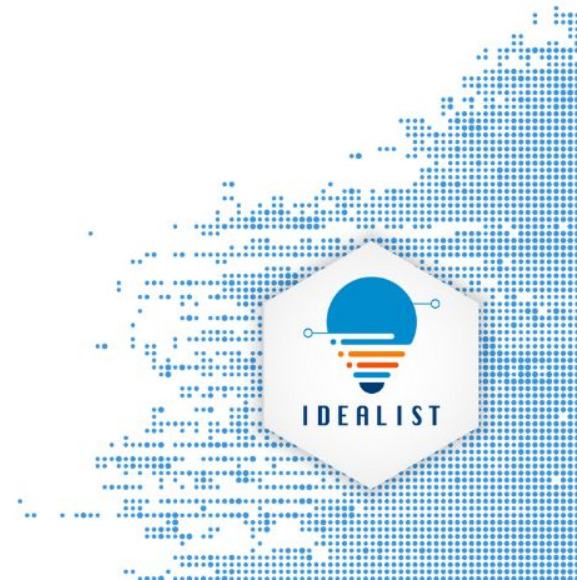
What is foresight? 1/2

- **Foresight** is a process that enhances persons' or organisations' abilities to understand all the internal and external factors and alternative decisions that form the space of possible, plausible, probable or preferred futures paths.

IDEALIST
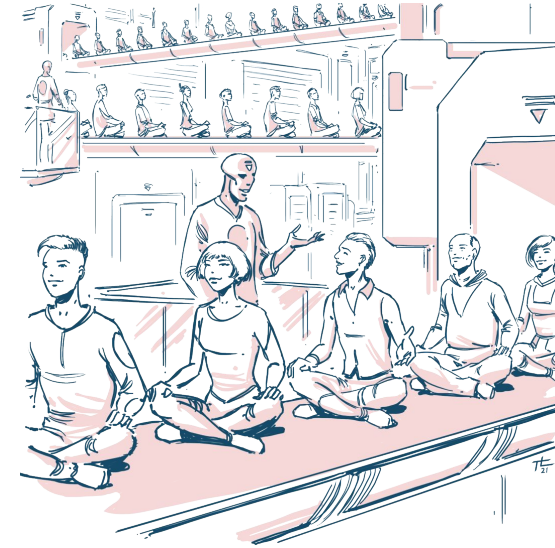
What is foresight? 2/2

- Thanks to such knowledge, persons and organisations are able to **identify issues that are of major importance for the future and the present**, they have a better understanding of what is relevant and what can be ignored, and they are better informed to make strategic and visionary decisions facilitating their long-term plans and objectives.

IDEALIST

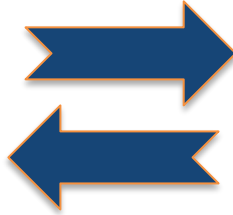# How does Futures Literacy link to (strategic) foresight?

Source: OECD 2023

IDEALIST
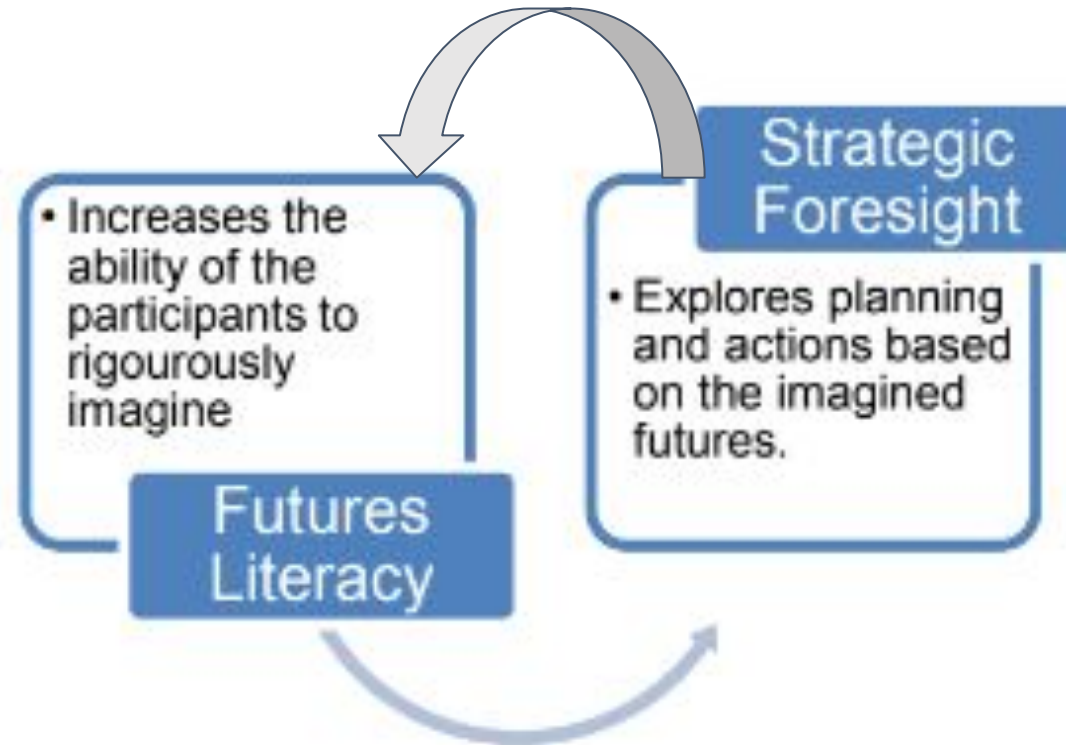
Foresight goes beyond forecasting

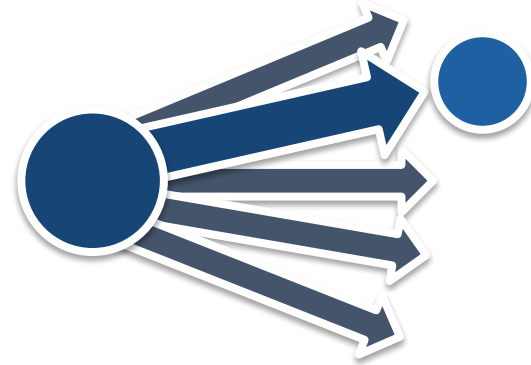## FORECAST ⇄ FORESIGHT

Input (data) => Output (Forecast)

Inputs (things happening)
=> Analysis => Interpretation => Forward looking
=> Outputs (Options/ Scenarios)

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IDEALIST

"

"An important risk companies face is that major shifts in the business environment can make entire investment strategies obsolete, ultimately resulting in the loss of their competitive position. In anticipating such shifts, forecasts are of little help given that they are usually based on the assumption that tomorrow's world will be much like today's."
(Cornelius, 2005)

Unique value proposition of foresight 1/2

- The key value of foresight lies in its ability to obtain sufficient details (insights) on the external situation sufficiently **early** to enable an internal organisational **response**, such as:
    - taking advantage of emerging opportunities by changing organisational goals or
    - addressing potential adverse consequences of emerging threats by taking adaptive, mitigative or preventive actions related to existing organisational goals.

IDEALIST
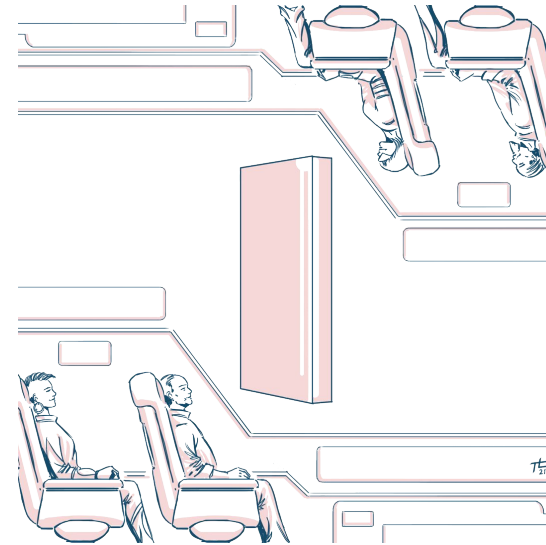
Unique value proposition of foresight 2/2

- To sum up, the main benefits of **foresight** are as follows. Foresight:

  - helps decision-makers develop and make choices,

  - challenges long-held beliefs and/or orthodoxies,

  - focuses resources and attention of decision-makers,

  - helps prevent and anticipate certain developments.

IDEALIST
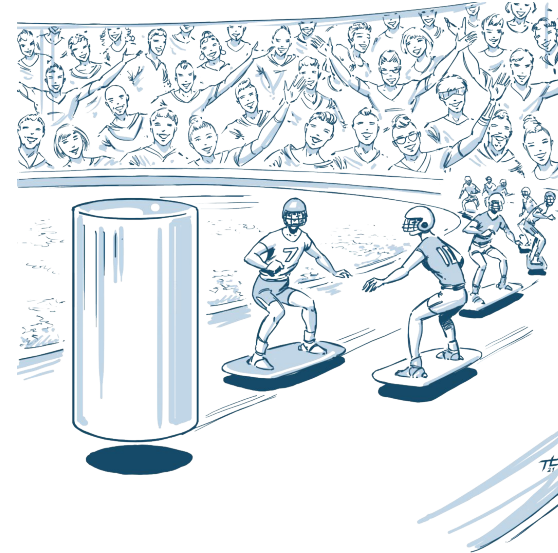
Group work principles

- Treat everyone with respect.
- Listen attentively to what others have to say.
- Think outside the box.
- Do not judge or interrupt others' speeches.
- Participate in the discussion.
- Stay on topic.
- Comments should be concise and relevant.
- The group facilitator decides who's next to speak.
- The group facilitator is neutral and does not participate in the discussion.
- Take a break when needed.

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"The ability for which managers are most celebrated — the ability to get things done — is only one part of their necessary skills. Equally important, and much harder to come by, is the ability to see ahead."
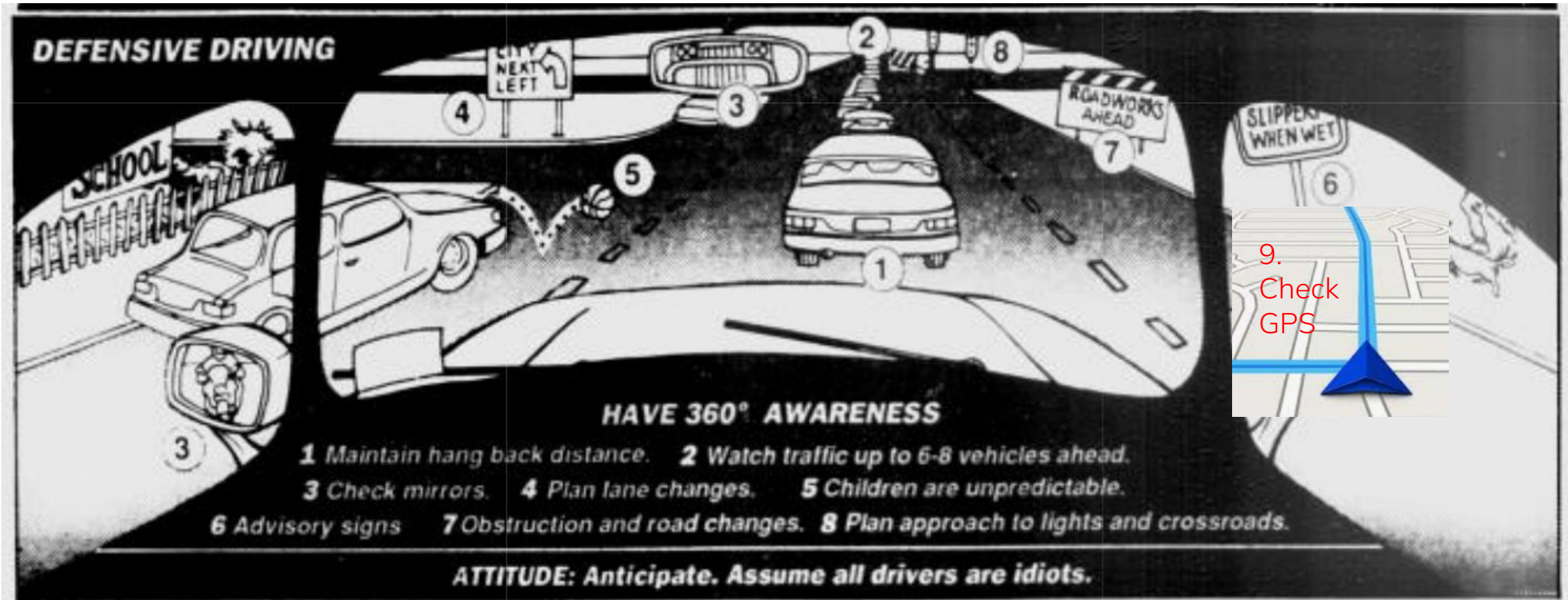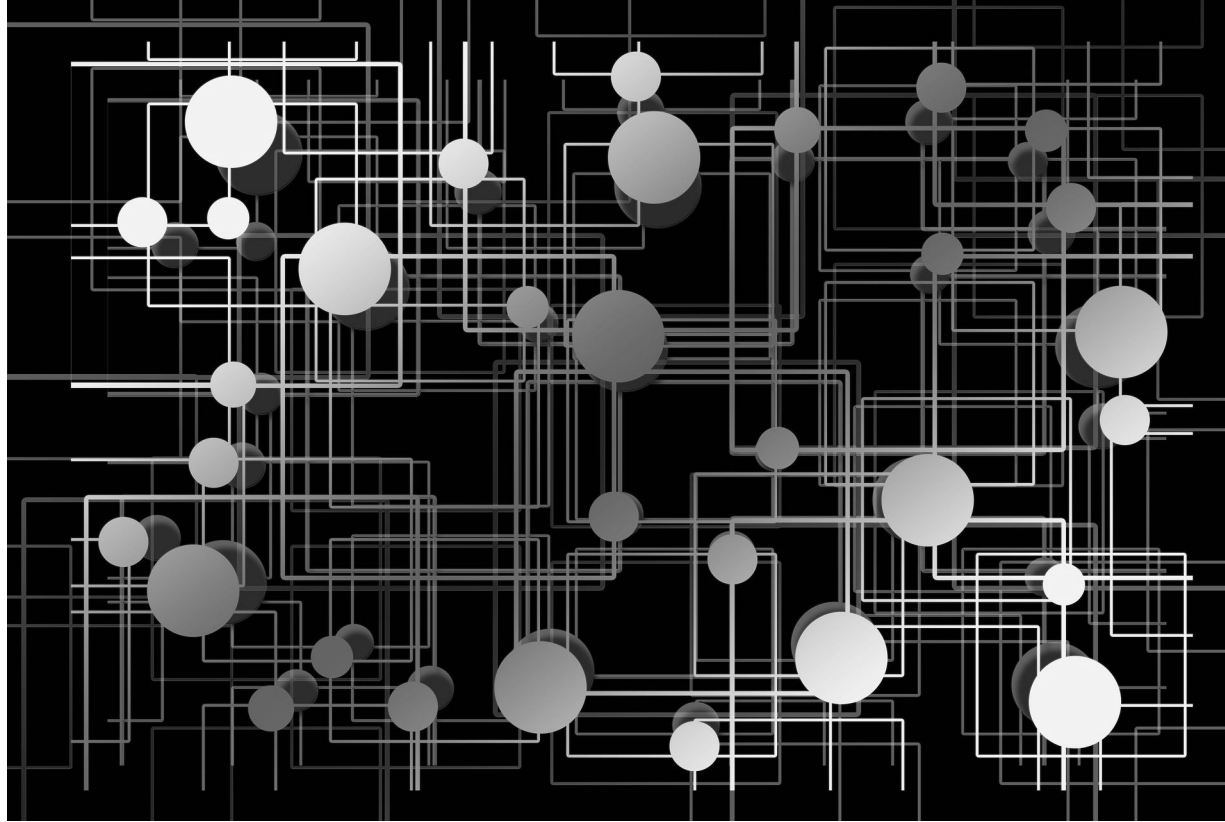
Pierre Wack (Shell)

Introduction to Horizon Scanning

Part 1 - Plenary II

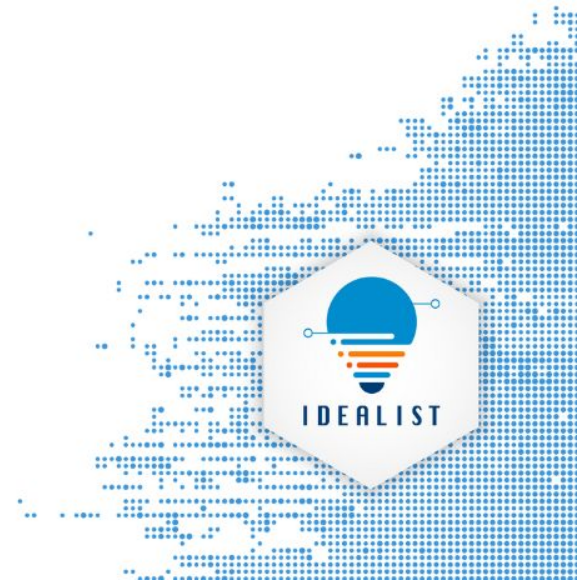# Horizon Scanning needed during periods of rapid change and uncertainty.

Key concepts: External & internal forces of the ecosystems

https://pixabay.com/illustrations/system-web-news-network-connection-2457648/

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Key concepts: Generic foresight framework

INPUTS

Things happening

ANALYSIS/ INTERPRETATION

What is really happening?

FORWARD-LOOKING

What could happen?

OUTPUTS

What might we need to do?

STRATEGY/ POLICY

What will we do?.

HORIZON SCANNING
Trends, Drivers & Signals
(can be: political, economic, societal, technological, environmental, legal etc.)

Source: Voros 2003

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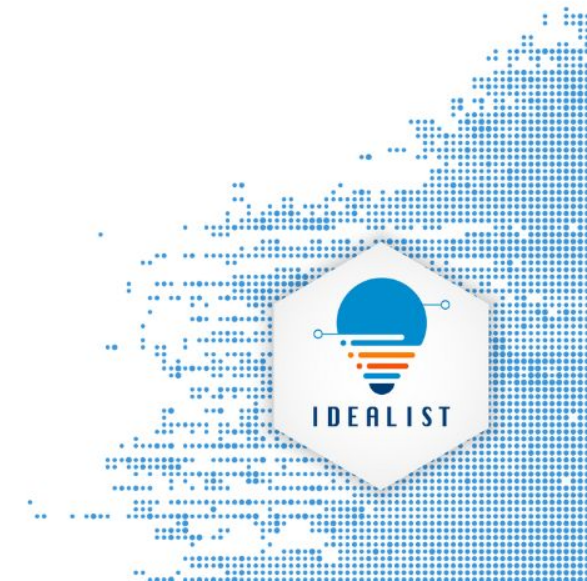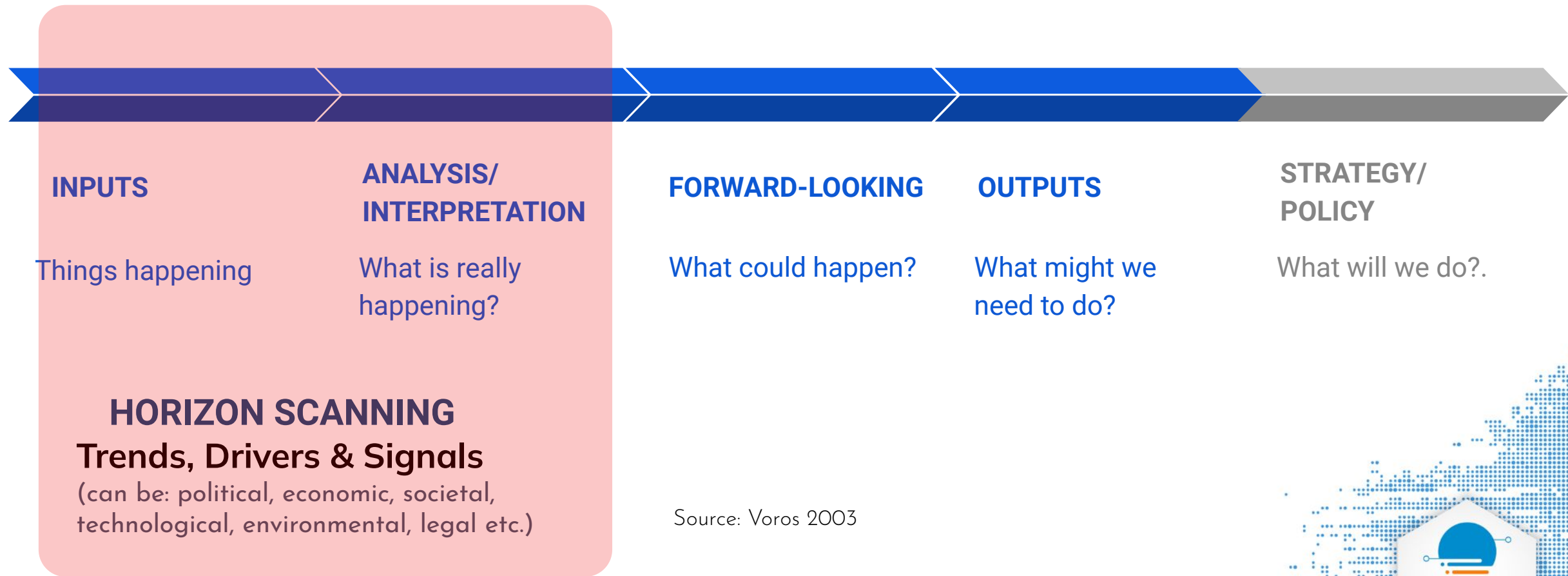
Key concepts: Horizon Scanning

- Thoughtful scanning is the **foundation** of foresight.
- **The objective** in scanning is to identify developments that could fundamentally change or disrupt the issue or system that we are studying in unexpected ways. The challenge is to look for early signs or weak signals that change is occurring.
- These changes can take **many forms**:
  - a new technology, economic restructuring, a famine, new values, new gender roles, new ideas, etc. The list is open ended. In the absence of data, weak signals are the evidence that disruptive change could be underway.

IDEALIST
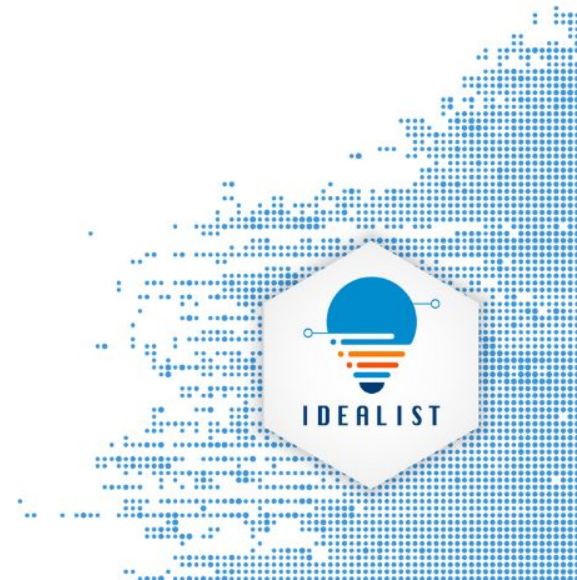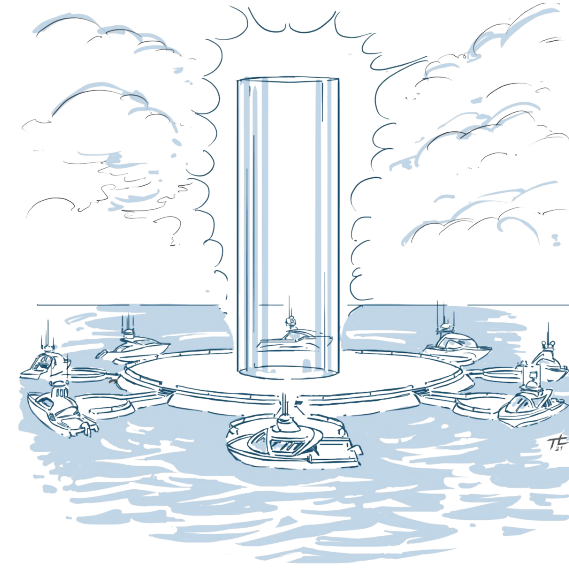
Key concepts of HS: Trends, drivers, signals

Key concepts: trend definition

Definition of a trend:

- A historical change over time (up until the present).

- Changes that are measurable/observable, which means that quantitative or qualitative data can be collected, which can illustrate the historical pattern.

- Indicate a clear direction of change and dynamics.
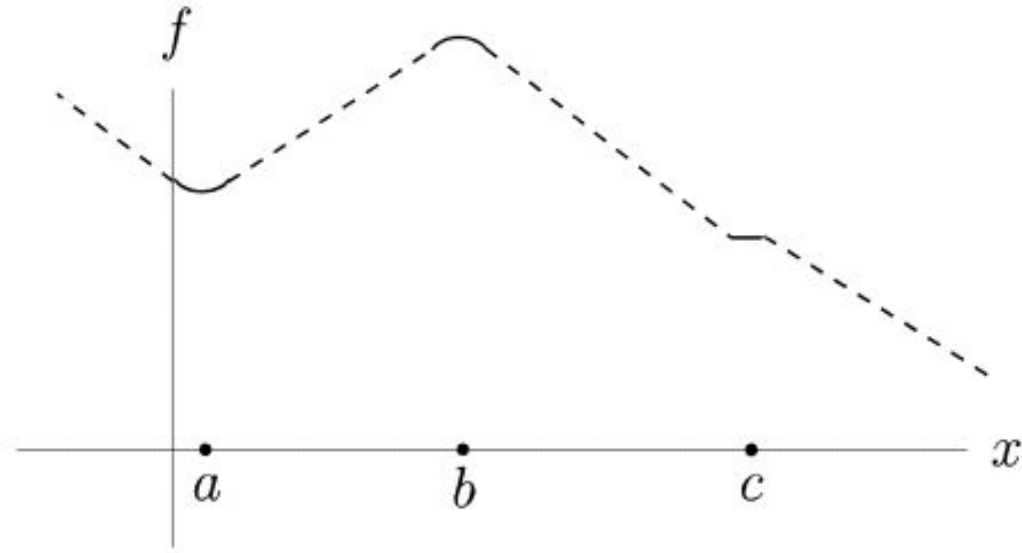
Based on: John Casti, Prosperity on the edge of crisis, 2017.

Key concepts: example trends

Examples of trends:

- Decline in enrollment in public schools

- Growing demand for specialized skills

- Widening economic inequalities
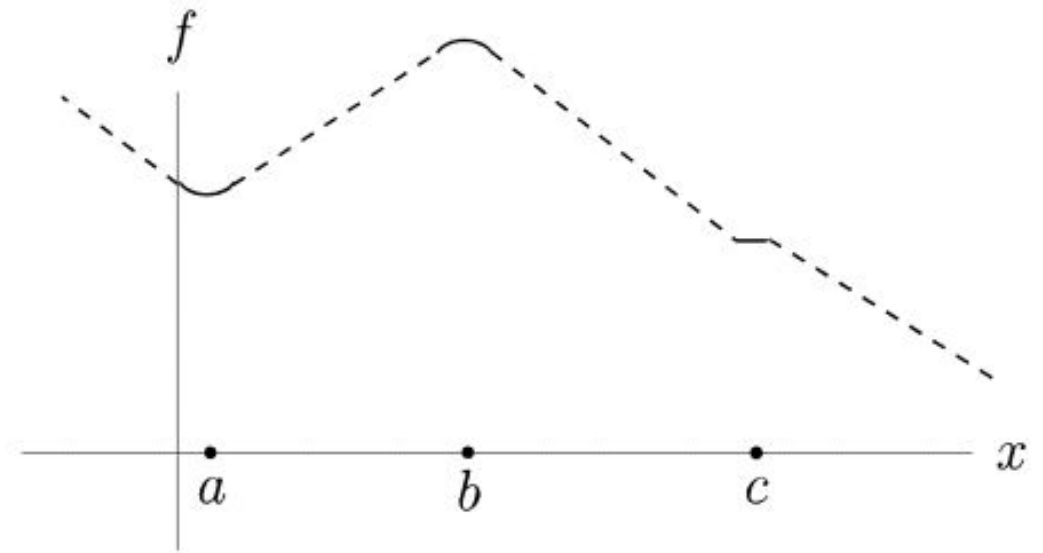
Based on: John Casti, Prosperity on the edge of crisis, 2017.

Topic:

▷ **FUTURE OF EDUCATION**

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Key concepts: driver definition

Definition of a driver:

- Influential forces of changes that are currently shaping or have the capacity to shape or transform a given system.
- Variables that can take on different states and thus affect a system in many ways.
- They are often called uncertainties.
- A specific type of driver is a wild card event (e.g. war)

Based on: John Casti, Prosperity on the edge of crisis, 2017.

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Key concepts: driver examples

"Drivers" = human action, chance, necessity, random trigger
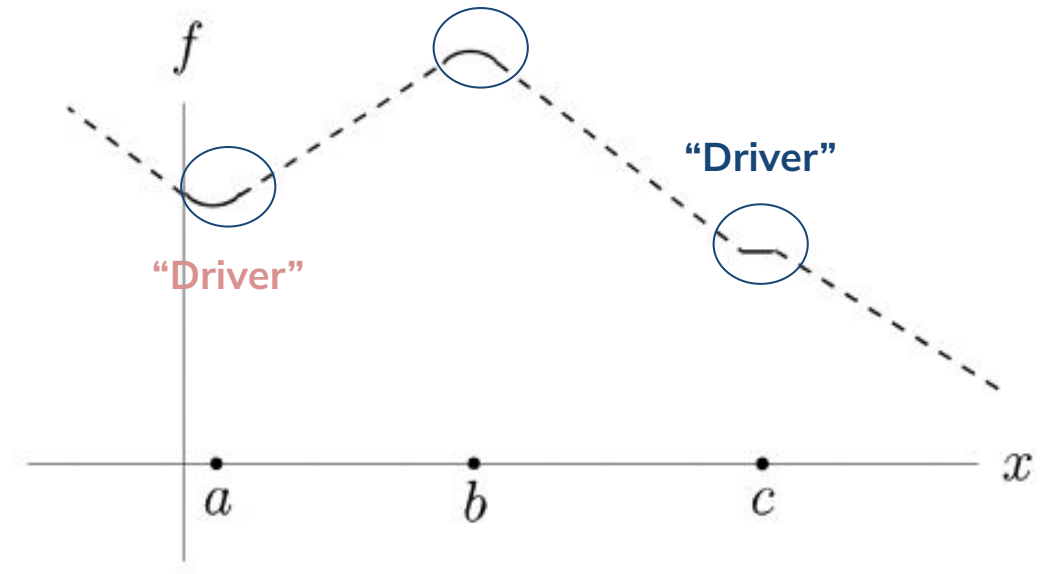
Examples of drivers:

- Demographic shifts
- Regulation and government policies
- Performance metrics
- Teacher qualifications

- Global pandemic threat

Based on: John Casti, Prosperity on the edge of crisis, 2017.

Topic:
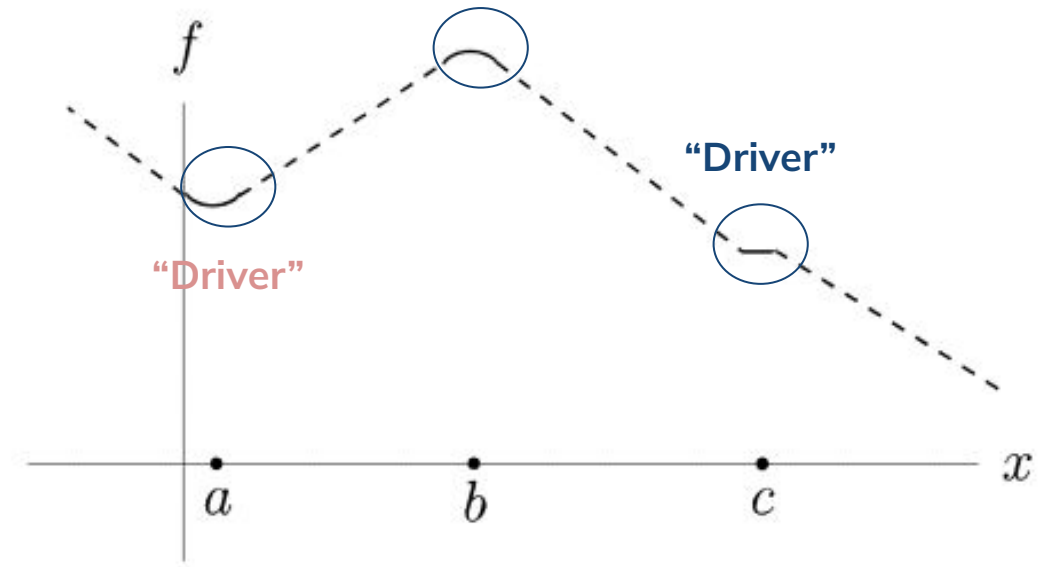- ▷ **FUTURE OF EDUCATION**

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Methodological process of Horizon Scanning

1. Identify and frame the scanning **needs** (topic, participants, expected outcome)

2. Scanning and collecting data: collect relevant **information** about the external environment

3. Interpretation and **filtering**: analyse, organise and prioritise the findings

4. **Sense-making**

5. **Communicating** the results

6. Use the information in **decision-making**

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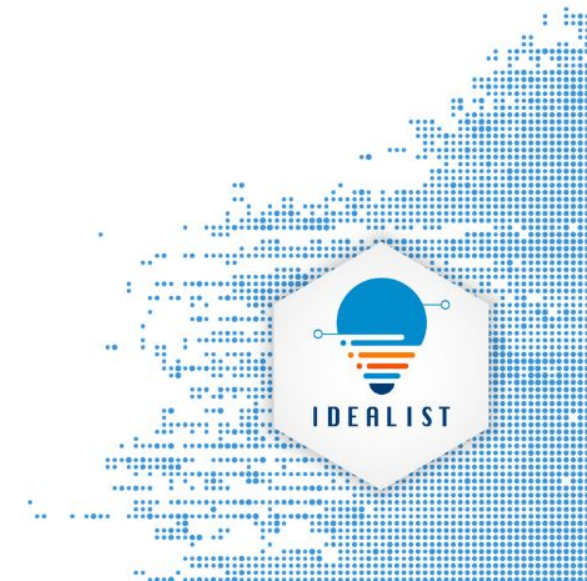
Identifying Uncertainties

Group work

Introduction to Horizon Scanning

Part II - Plenary II

Key concepts: Horizon Scanning

- Scanning for weak signals must be distinguished from searching for information.
    - In searching, the research scope is fairly well defined, often based on an analyst's particular interests and expertise on a topic.
    - Scanning looks for new insights outside an analyst's existing mental model.
    - **In scanning, we do not necessarily know what we are looking for**, hence the scope is broad, often shedding light on previously uncharted unknowns.

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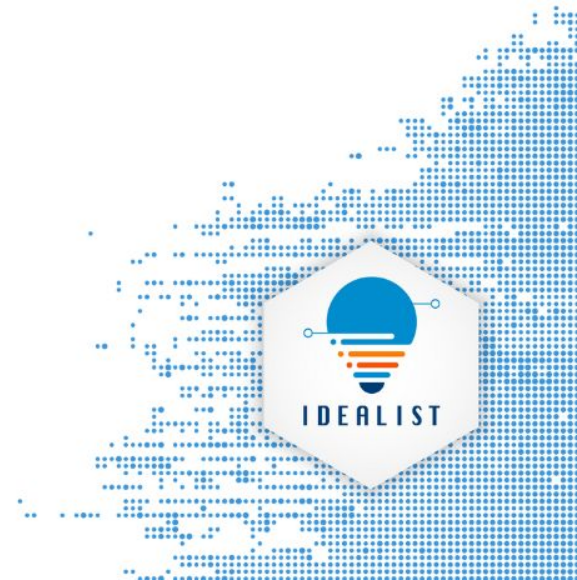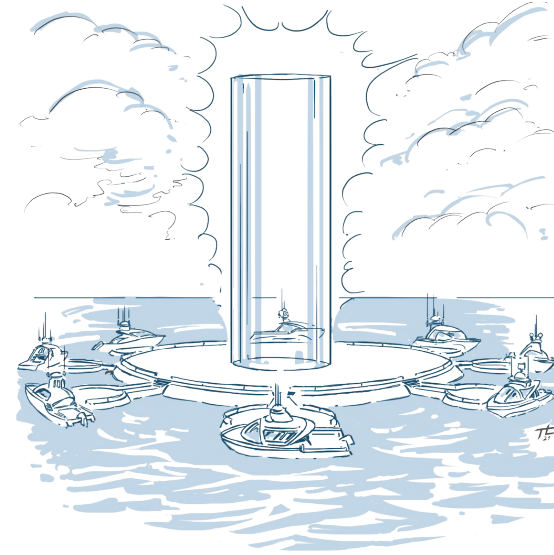
Key concepts: scanning guidelines

What shifts shall we look at:

"Signal"

- Shifting behaviors and preferences
- Shifting attention and narratives of key actors
- Shifts in business models, new models of collaboration etc.
- Scientific or technological advancements (nano-bio-cogno-info)
- Inefficiencies and gaps in systems or regulations
- …….

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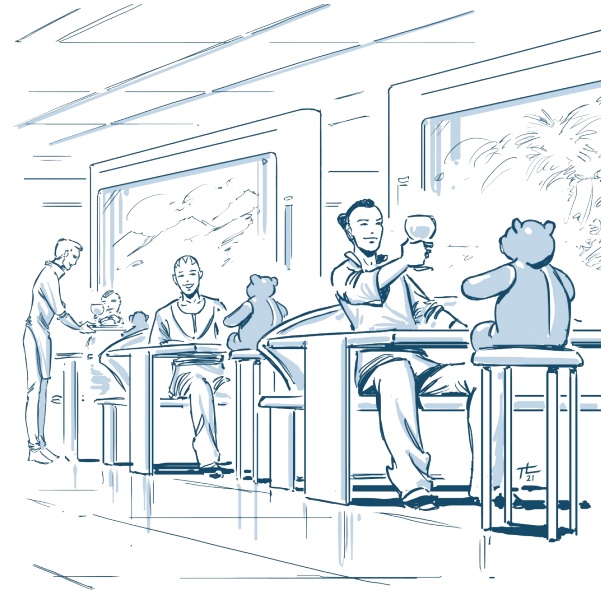
Key concepts: signal examples from the past

General signals that became a disruptive change:

- The rise of e-commerce platforms like Amazon disrupted traditional retail models
- Popularity of social media platforms like Facebook and Twitter in the early 2000s disrupted the way people communicate and share information
- The passage of GDPR in the EU in 2016
- The development of blockchain technology in the early 2010s, which challenged traditional financial systems
- The SARS and MERS outbreaks in the early 2000s

Signals that were a fad:

- 3D television

"Signal"

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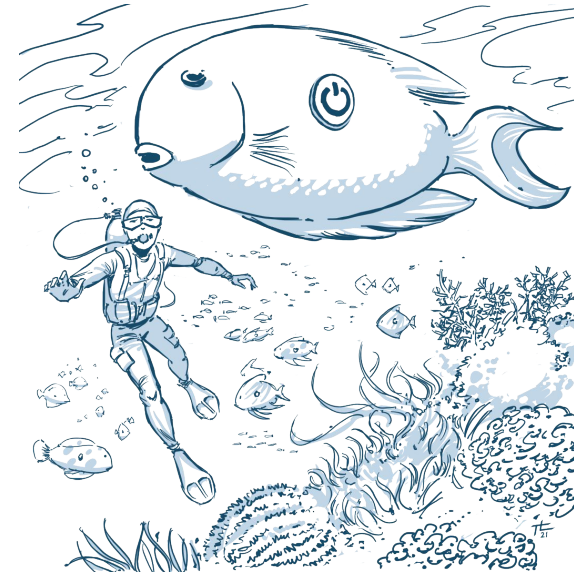
Key concepts: signal definition

- **Definition of a signal:**

  - The evidence that disruptive change could be underway.
  - For example: emerging technology, emerging trend, sign of new, potential wild-card (e.g. surprising localisation of a signal; surprising & revolutionary development, leap, disaster, social change)

"Signal"

IDEALIST
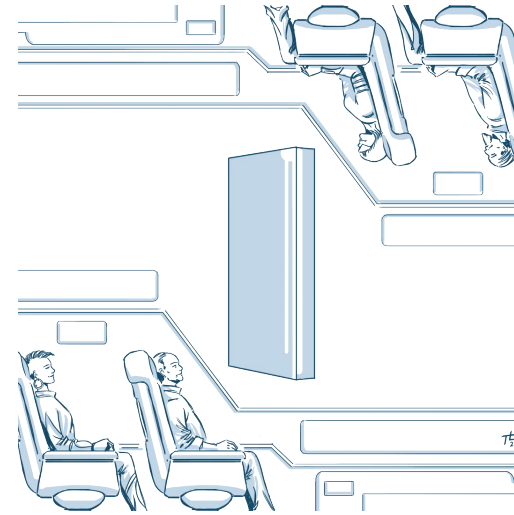
What makes a good signal? 1/2

- The ideal weak signal meets the following criteria:
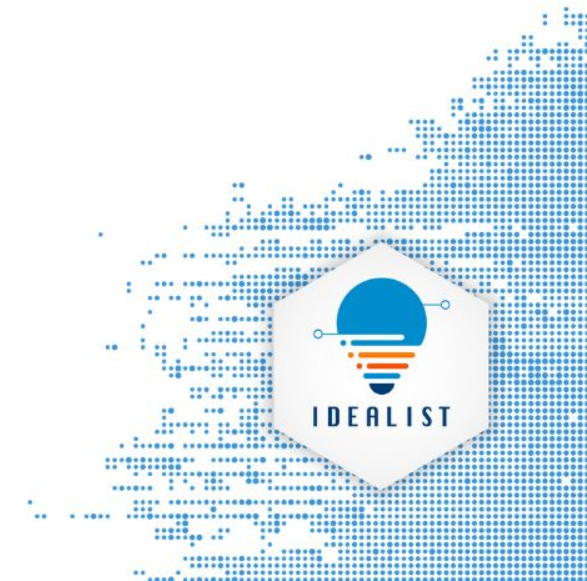- **PLAUSIBILITY** – there is some evidence that the change is occurring or could occur.
- **NOVELTY** – the change is new or relatively unknown to you and the stakeholders who would be affected by the potential consequences.
- **SIGNIFICANCE** – the consequences are significant. They might cause a very large disruption in one domain, or have broad consequences that affect several domains.
- **TIMELY** – this weak signal is relevant for the time period of interest. Depending on the timeframe of analysis one can be interested in potential consequences that could occur within 5-10-15-20-30 years.

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What makes a good signal? 2/2

What makes a good weak signal? Elina Hiltunen suggests a number of ways to recognize a good weak signal:

Makes me laugh

Seems unreal

Not much information about it

Strange/weird

Eureka moment!

Challenges the status quo

Rejected by the establishment

Could be highly disruptive

Never been done before

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Collecting signals: guiding questions (1/2)

General guiding questions

- What is new and emerging?
- What have I not heard anywhere else?
- Is no one talking about this yet?
- Does this challenge a commonly held assumption about the world or ecosystem?
- Are decision-makers and other stakeholders ready for this?
- Would this have interesting implications or consequences in fields beyond my own?
- What could be found only in one particular place but - when scaled could transform the ecosystem significantly?
- What is so unexpected that gives you an "a-ha!" moment when you come to notice it as a strange future of an ecosystem?

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Collecting signals: guiding questions (2/2)

Specific guiding questions

- What new **scientific or technological** breakthroughs might be underway? Does this discovery break previous ways of doing things?
- What new **intellectual ideas**, beliefs, worldviews are emerging?
- How is a **way of living/ culture** starting to change?
- Are **societal roles** / models starting to change? How? Why?
- What are some emerging changes in relation to **social media & Internet**?
- Are **consumption models** starting to change? How? Why?
- Are there any emerging shifts in **business models** or the **way we work**?
- Are there any new emerging shifts in **global norms, practices or regulations** (e.g. related to trade, taxes, IP, environment)?

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Collecting Signals

Group work

Describing and Assessing Signals

Group work

Maps of Drivers

Group work

Sense-making

Group work

Report-back

- Please present the results of your work (7-10 minutes/ by a group):
  - The signals,
  - the assessments on 4CF Matrix and
  - the maps of drivers and signals
- Please share your observations & feedback

Summary & next steps

Key takeaways

- In Horizon Scanning **a signal** is a sign that a significant change is starting or that it could be underway.
- Signals **challenge our mental models**. We have an a-ha moment because they do not fit into our understanding of the expected future.
- There is a sense that they could have **a profound impact** on the issue or system under study.
- Signals **are found through experience, reading, interviews and dialogue**.

"Significance"

"Novelty"   **"Timeliness"**

"Plausibility"

IDEALIST
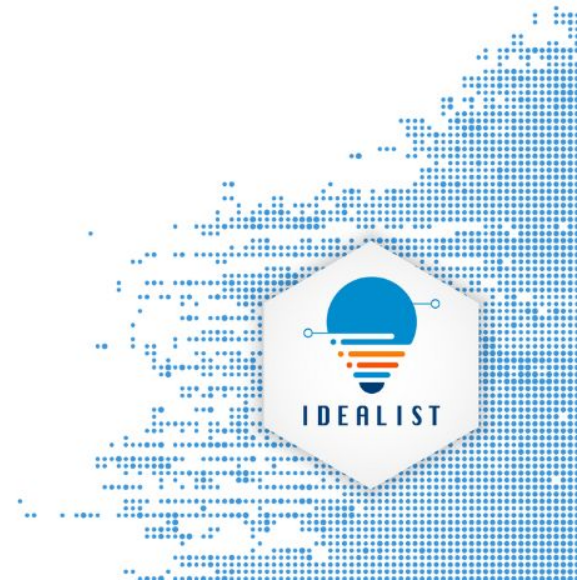
"The more aware the wolf pack is of the terrain in which it runs, the more effectively it hunts"
Pierre Wack (Shell)

Key takeaways

- **Signals** may originate within your domain, or they **could come from another domain**.

- Most organizations are good at spotting changes in their own domains, and most of us are good at finding information that confirms our existing views.

- However, often **disruptive changes originate outside your domain**—the places you are not looking, and in the areas your own biases may naturally steer you away from.

Please share your reflections.

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THANK YOU!