

For sustainable
healthcare systems:
focus on robustness
rather than
optimization

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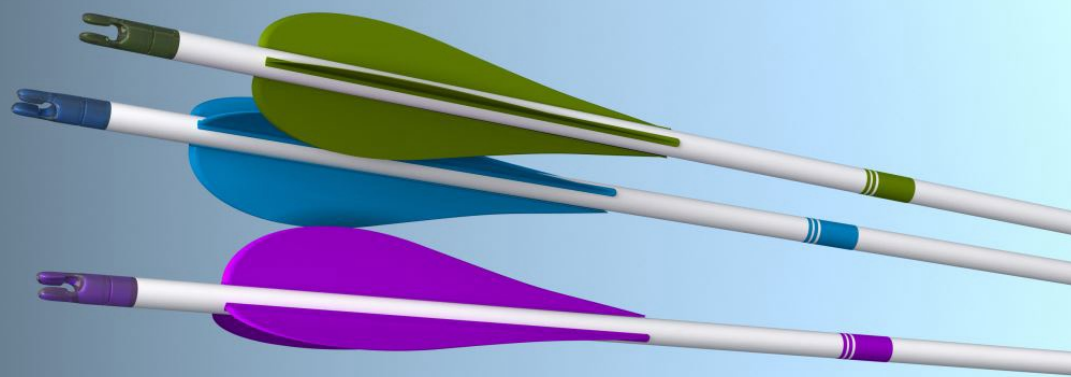


Nursology Theory Annual Conference
Honoring Our Heritage – Building Our Future
“Nursology Theory Think Tanks for the Future.”
March 22th 2024





Performance &
Efficiency

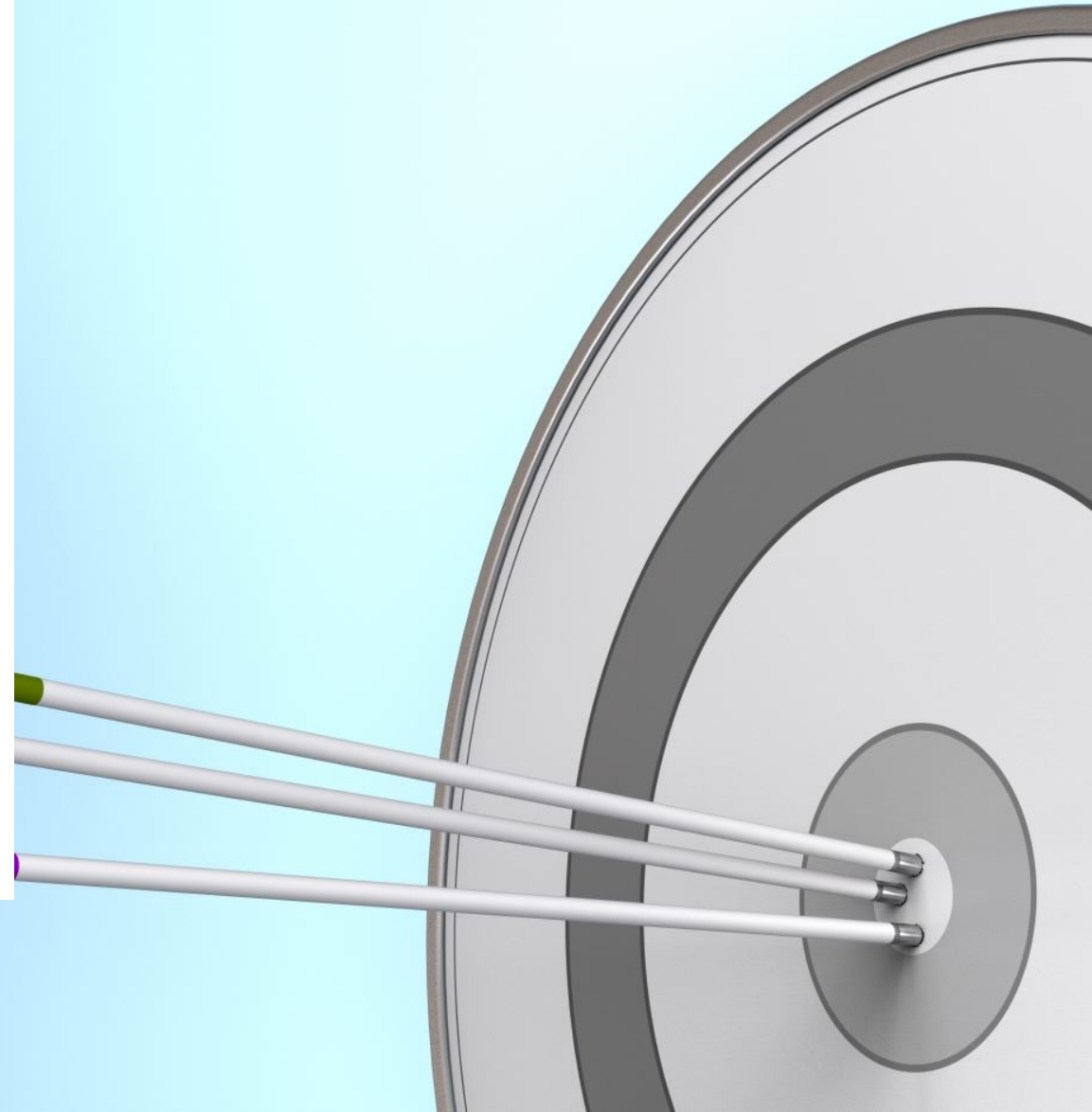


Performance & Efficiency

- Performance: achieving the best possible results with the same resources (WHO, 2000)
- Efficiency: ability of a machine, technique, person, or organization to deliver the “desired results with little or no waste (as of time or materials)” (Merriam-Webster, 2024)

Performance & Efficiency (2)

- Health System Performance Assessment Frameworks (Klassen et al., 2010)
- Efficiency : “the extent to which a hospital maximizes the volume of health care services delivered for the minimal amount of resources used” (CIHI, 2015)





Optimization for
greater efficiency



Optimization for greater efficiency

- Efficiency involves **optimizing care** and service production processes within the healthcare system (CIHI, 2013, 2015)
- “Triple aim” / Institute for Healthcare Improvement (IHI, 2008) :
 - improving individual care experience
 - enhancing population health
 - reducing per capita healthcare costs

Optimization for greater efficiency (2)

- Belief that optimization is linked to societal demands for efficiency (Whittington et al., 2015)
- Introducing principles borrowed from the private commercial and industrial sectors to “improve processes”




Optimization within healthcare institutions



Optimization within healthcare institutions

- Shorter hospital stays
- Undergo day surgery/hospitalization
- Delivering care within shorter timeframes
- Reducing perceived need for hospital beds and the required staff when nursing positions are calculated based on the number of physical beds




Consequences of optimization on human beings and the environment



Consequences of optimization on human beings and the environment

- In a political environment where ultra-liberal discourse dominates, solutions that align with the ideological foundations of the system are favored (Foth et al., 2017)
- Scientific literature demonstrates that current management and organizational practices stemming from the logic of optimization lead to human suffering in our healthcare organizations (Meredith et al., 2002; Dall et al., 2020)



Consequences of optimization on human beings and the environment (2)

- increasing the intensity of nursing work
- contributing to professional burnout
- compromising patient safety

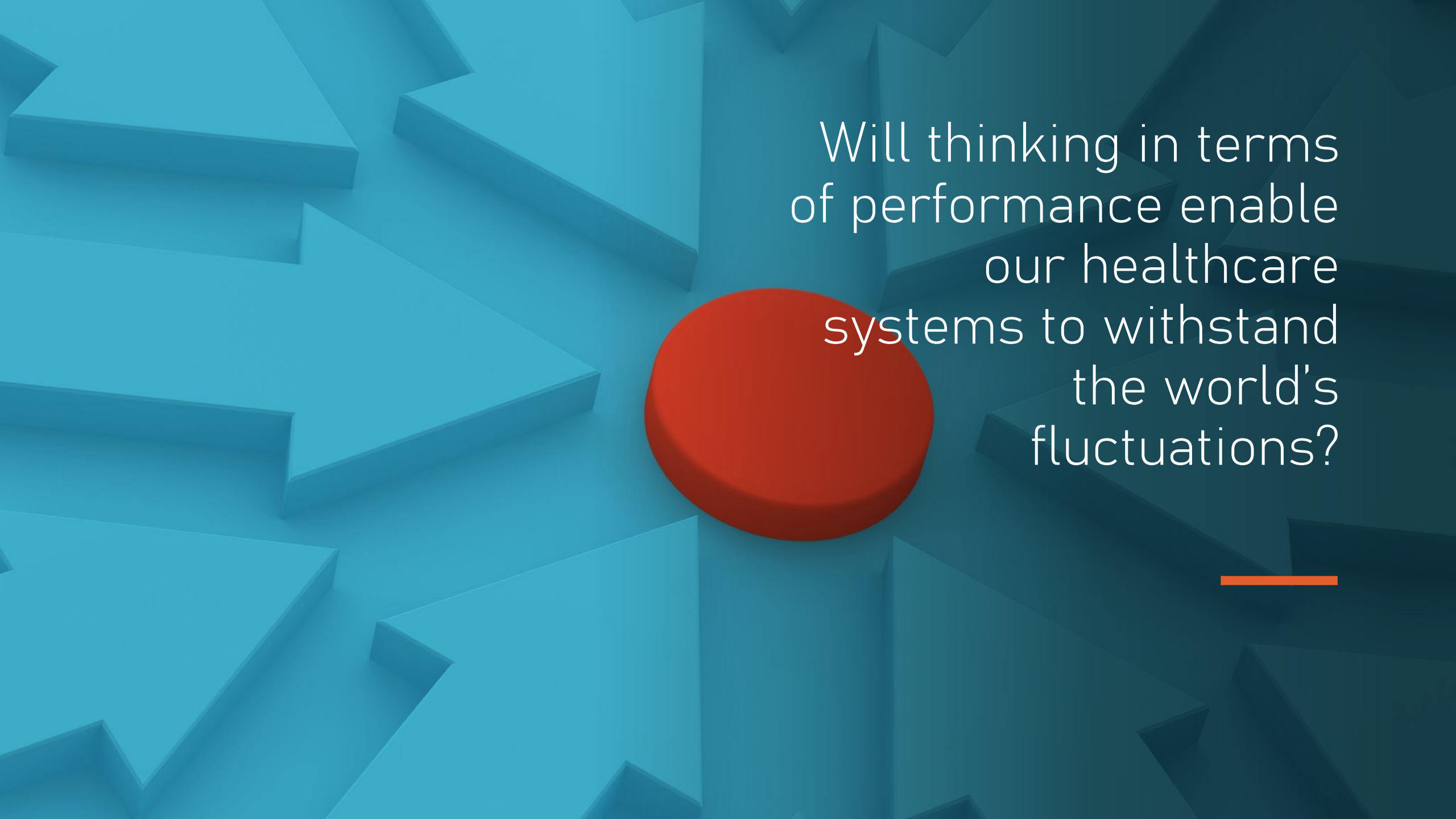
The COVID-19
pandemic as an
indicator of fragility



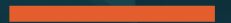


The COVID-19 pandemic as an indicator of fragility

- Systemic challenge (Rizzo et al., 2023)
- Many others
 - changes in our ecosystems related to climate change
 - biodiversity collapse
 - social and political instability

The background features a series of blue, three-dimensional, angular shapes that resemble a stylized sunburst or a series of steps. A single, solid red circle is positioned in the center of the image, overlapping the blue shapes. The text is white and positioned to the right of the red circle.

Will thinking in terms
of performance enable
our healthcare
systems to withstand
the world's
fluctuations?



Dr Olivier Hamant

(Hamant, 2022)


LIFE SCIENCES





Resisting the Fluctuations of the World


- profound reflection on living beings' resilience and capacity for adaptation
- three interconnected capacities: **robustness**, adaptability, and transformability
- robustness : the property of a system “**to establish a new equilibrium in the presence of internal or external fluctuations**” (Hamant, 2022)



Robustness

(Hamant, 2022)

- Redundancies
- Inconsistencies
- Variations
- Incompleteness
- Apparent wastage
- Slowness
- Variable durations
- Heterogeneity


A close-up photograph of several pieces of coral. The coral polyps are a deep red color, and the central cavities of the polyps are glowing with a bright blue light. The background is dark, making the glowing coral stand out.

A robust organism functions sub-optimally, accepting that some things may not be efficient. This allows it to rely on internal resources for autonomous functioning, maintaining short-term stability and evolving over the long term.



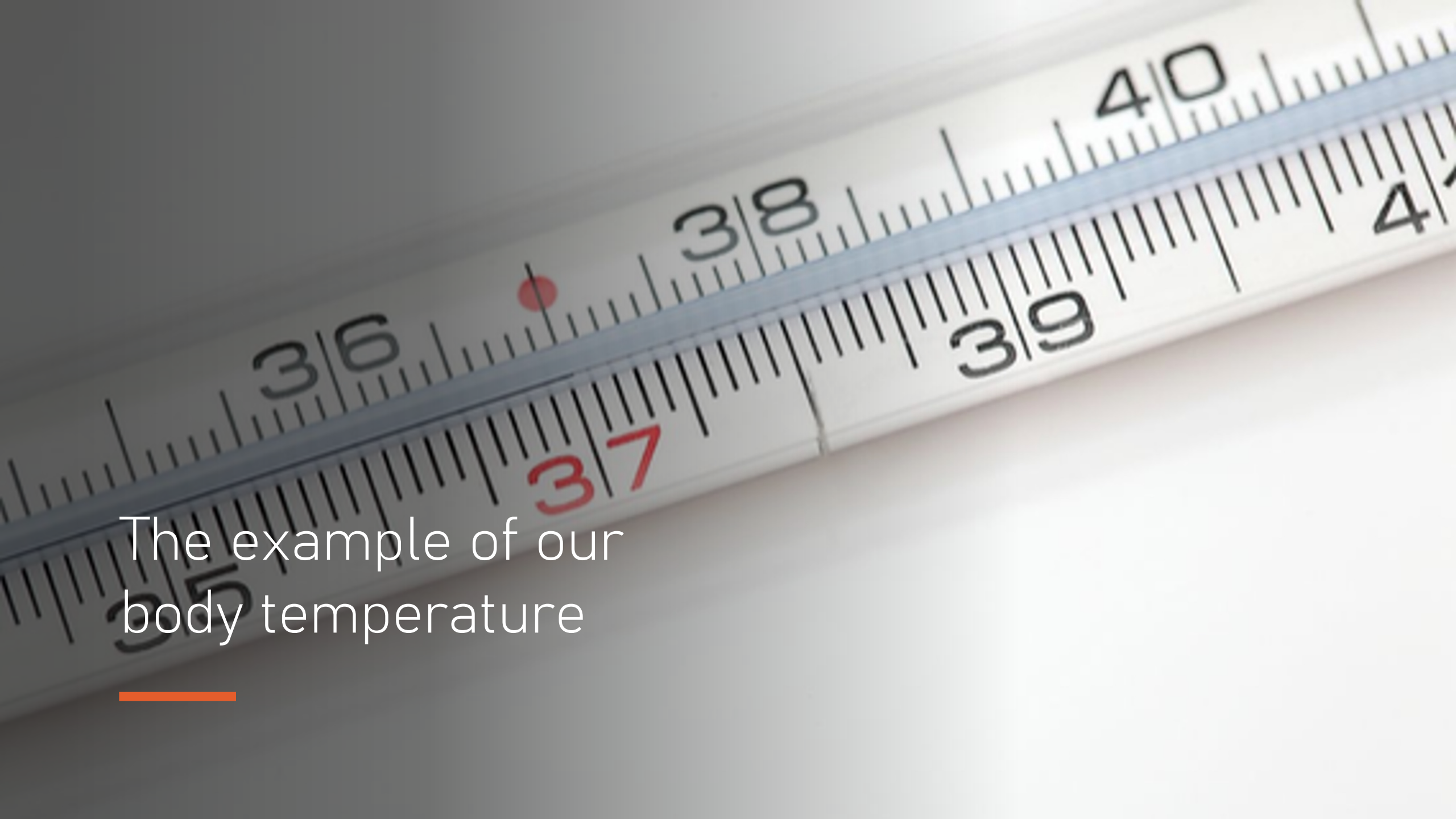
Sub-Optimality for Viability





Viability (Hamant, 2022)

- Viability identifies at least one evolution within a dynamic system subject to a set of fluctuating constraints **in which all the constraints necessary for life to exist are satisfied over the long term.**
- This state is called the **viability kernel.**
- If **no evolution** is viable, the viability kernel is considered **empty.**
- According to Hamant, biology clearly indicates that **aiming for a single optimum can only lead us into a situation of non-viability,** as it makes us unable to cope with system fluctuations.



The example of our
body temperature



Rethinking Organizations

- State of non-viability
- Dehumanization = symptom of a non-living organization





Robustness

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The background of the slide is a composite image. The top and bottom sections show a close-up of a bronze relief with raised Chinese characters. The middle section features a row of golden, reflective spheres of various sizes resting on a polished surface.

Robustness and Nursing Management

- Redundancies
- Inconsistencies
- Variations
- Incompleteness
- Apparent wastage
- Slowness
- Variable durations
- Heterogeneity

A collection of medical supplies is arranged on a dark, textured wooden surface. In the center is a red first aid kit with a white cross and the words 'FIRST AID' printed on it. Surrounding it are various items: a blue stethoscope, a pair of blue nitrile gloves, a white surgical mask, a yellow pill bottle, a blister pack of pink pills, a roll of white bandage, a wooden tongue depressor, a pair of blue-handled scissors, and several other blister packs and pill bottles. The lighting is dramatic, highlighting the textures of the wood and the items.


Redundancies for autonomy

- Multiple check on blood bags and patient identity before transfusion
- Backup generators that can take over in case of a power outage from the grid
- Nursing management :
normalizing the fact that colleagues are sometimes on standby, akin to firefighters awaiting a fire alert



Apparent Waste for adaptability

- Shortage of protective masks / COVID-19
- Catastrophic floods / No more civil protection services
- Nursing management : **Establishing stocks**, contrary to the practices of Lean Management enthusiasts

A stack of cardboard boxes is arranged in a stepped pyramid shape against a white wall. On top of the leftmost stack is a small potted plant with green leaves. The boxes are brown and have black handles. The floor is a light-colored wood. The background transitions from white on the left to dark grey on the right.

Moving Away from Non-Living Organizations



Moving Away from Non-Living Organizations (Hamant, 2022)

- Robustness
- Circularity
- Importance of the collective



Favoring suboptimal organizations for greater robustness

- Adopting robustness for adaptability of our healthcare systems
- Fighting against fascination of academic circles / management principles (Lakeman et Molly, 2018)
- Swift initiatives are necessary at the **sociopolitical level**, including in the healthcare sector, to **prioritize only robust projects** from now on
- **Urgent action**: robustness can only be built when there are **margins of maneuver** that allow for it, as it requires time and financial investments

Thank You



Kim Tschang-Yeul, 2007: Recurrence
(Photo credit Dan Lecocq ©)